Cambridge Assessment

What is a non-specialist teacher?

Research Report

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Executive Summary

The number of non-specialist teachers in British schools has recently become a subject of interest to the media, who report of a crisis in teacher recruitment and retainment. Non-specialists and specialists alike make use of OCR's subject-specific resources, and so a study was undertaken in order to ascertain the types of resources or features within resources which would be particularly beneficial for non-specialist teachers. As little literature was found on the topic, an empirical study was carried out.

An online questionnaire was devised, targeting teachers (both specialist and non-specialist) and heads of department of four subjects which were of particular interest to OCR: Maths, Drama, Physics, Computer Science and ICT. Teachers were surveyed on a range of different topics regarding their specialism, teaching experience and resource requirements. Heads of department were surveyed regarding the challenges of recruiting specialists, and managing non-specialists in their subject.

Potential participants were contacted using slightly different methods to studies of this kind within ARD. Rather than using details of OCR centres offering the subjects of interest, widescale use was made of the organisation's social media accounts, mailing lists and online forums in the hope that it would yield a larger number of responses than usual, and from a more diverse range of schools and teachers. This approach was particularly successful in the recruitment of Drama heads of department, Computer Science/ICT teachers via OCR's dedicated subject-specific Facebook groups. Maths teacher participation was particularly successful via learned society contacts.

In total, 1094 participants' responses were usable, after data cleaning took place. This included 377 specialist teachers, 167 non-specialist teachers and 550 heads of department. Strongest participation came from Computer Science/ICT (343 participants), with 301 Maths participants and 272 Drama participants, but relatively few (178) Physics participants. Comparisons could nonetheless be made between the responses of specialists and non-specialists, and sometimes between these groups within subjects, although at times there were low numbers when broken down and so statistical testing or meaningful comparisons could not always be made.

Non-specialist teachers were found to be drawn from a range of experience and subject specialism, many of whom due to teacher shortages in their non-specialist subject. They generally taught subjects which may be considered somewhat aligned with their non-specialism (for example, Physics non-specialists specialising in other Sciences; Drama non-specialists specialising in English or other expressive arts; Computer Science non-specialists specialising in ICT; and Maths non-specialists specialising in Science). They described challenges associated with teaching outside of their specialism, though there were also a number of 'silver linings' uncovered. For example, most reported that they enjoyed teaching their non-specialist subject, with some even saying that they preferred teaching it to their specialism. In terms of resource support, a 'more is more' theme emerged in participants' responses across all subjects, suggesting that OCR should aim to include as much support and guidance as possible in their resources, including everything from lesson plans, content support, and exam preparation support.

Heads of department described many challenges associated with supporting non-specialist teachers, generally describing it as a non-desirable though increasingly common occurrence. In particular, time pressures associated with their role were referred to, along with budget constraints in upskilling non-specialists. As with non-specialists, heads of department seemed to believe that maximum support from exam boards would be highly beneficial for them because it would help reduce the time burden on heads of department.

1. Introduction

This project originally began as a literature review which aimed to assist OCR in the development of classroom resources which could be accessible to non-specialist teachers of Drama, Maths, Physics, Modern Foreign Languages (MFL) and ICT/Computer Science. However, the review found very little literature on the subject and was mainly confined to data tables regarding the proportion of non-specialists in certain subjects and at certain levels of education.

The following list of abbreviations might be useful when reading this report:

- FMSP Further Mathematics Support Programme
- GTP Graduate Teacher Programme
- HE Higher Education
- HEFCE Higher Education Funding Council for England
- HOD Head of Department
- I(C)T Information (Communication) Technology
  Note: ICT will be used as a 'catch-all' throughout this report to include IT, unless stated otherwise.
- KS3/4 Key Stage 3/4
- MFL Modern Foreign Language
- NCETM National Centre for Excellence in Teaching Mathematics
- NSS Non-Specialist Subject
- NST Non-Specialist Teacher
- PGCE Post Graduate Certificate of Education
- SIVS Strategically Important and Vulnerable Subject
- SS Specialist Subject
- ST Specialist Teacher
- TQ Teaching Qualification

Due to the fact that there was little literature in this area, the findings of the literature review are summarised in Table 1, built around a statistical release by the Department for Education (2015).

1.1 Who are the non-specialist teachers? (That is, what are their typical background characteristics?)

Table 1 – Summary of non-specialist teacher characteristics by subject

Subject	***Highest level of qualification held in a relevant subject***				***Any relevant post A level qualification (%)***	***No relevant post A level qualification (%)***	***Total head count (thousands) (%)***	***Further Notes***
	Degree or higher (%)	***Bachelor of Education (%)***	***PGCE (%)***	***Other qual. (%)***				
ICT	25.2	1.9	14.1	1.1	4.2	57.6	14.0	• Problem relates to well-qualified ICT teachers who weren't specialist to begin with, now being required to teach Computer Science. • Many did business studies, geography and PE degrees (Brown, Sentance, Crick, & Humphreys, 2014).
Drama	45.7	2.3	6.1	1.3	55.4	44.6	9.6	• Drama has a high proportion of teachers with no relevant post A level qualification (Department for Education, 2015). • In England, there has been a significant decline in the number of state schools offering arts subjects taught by specialist teachers. Since 2010, drama has 8% fewer teachers and 4% fewer hours taught (these hours include teaching time from non-specialists). • National Drama receives requests for support from members who are upset by having to have KS3 taught by non-specialists, causing them to have to do more work at KS4 (GCSE) as the foundation of knowledge taught at KS3 has been weak.
Maths	45.5	4.7	22.2	3.4	75.8	24.2	33.4	• Some Maths teachers did degrees which taught and required a high level of numeracy, e.g. Engineering, Physics.
Physics	52.4	1.7	8.1	1.2	63.5	36.5	6.4	• In November 2014, 86.4% of science lessons taught to pupils in year groups 7 - 13 were taught by teachers with a relevant specialist qualification – a decrease of 1.2% on 2013 (Department for Education, 2015).

Subject	Highest level of qualification held in a relevant subject				Any relevant post A level qualification (%)	No relevant post A level qualification (%)	Total head count (thousands) (%)	Further Notes
	Degree or higher (%)	Bachelor of Education (%)	PGCE (%)	Other qual. (%)				• Physics has a greater proportion of teachers with no relevant post A level qualification than do the other sciences (Department for Education, 2015). • The teachers are spread unevenly over the different types of school and college. Sixth form colleges, grammar schools and independent schools appeared to fare best, but there is room for considerable improvement in the data available on subjects and degree classes. • Biologists dominate science provision in all the countries of the UK. • In England, teacher trainees in the physical sciences and maths are recruited from 40 or more subject areas. • In England, one in eight of those trainees with physics degrees opted to train to teach maths, either to avoid practicals or not to have to teach biology as part of combined science. • In England, science and maths teacher trainees enter on poorer degrees than those in the humanities. Lower entry qualifications are associated with higher dropout. • Relatively few physics and maths graduates are attracted to teaching because these subjects are often attractive to certain individuals due to their impersonal nature, whereas working with children day-in, day-out is an entirely different challenge. • Women are much more likely than men to want to become teachers, but only one in five of physics graduates is female. • In England, meeting the national targets for maths, physics and chemistry trainees would take over 40% of the new home-domiciled graduates in these subjects, though other degrees, for example engineering, may be appropriate. Advanced industrial nations do not necessarily want their best people to go

Subject	Highest level of qualification held in a relevant subject				Any relevant post A level qualification (%)	No relevant post A level qualification (%)	Total head count (thousands) (%)	Further Notes
	Degree or higher (%)	Bachelor of Education (%)	PGCE (%)	Other qual. (%)				
								into teaching, but rather into research, innovation and wealth creation.
French	52.3	2.9	19.5	2.0	76.6	23.4	13.6	• Teachers with specialisms (degrees/training) in other languages
German	52.8	1.2	13.9	2.0	70.0	30.0	4.8	
Spanish	34.2	1.1	13.4	1.6	50.3	49.7	7.4	
Other MFL	22.4	0.5	13.1	2.5	38.5	61.5	2.6	

Note: Computer Science data were unavailable

1.2 What are the problems that non-specialist teachers commonly encounter?

Again, the literature review on this topic found very little which was relevant. Therefore, it is summarised in bullet point form by subject of interest.

1.2.1 Computer Science & ICT

- Many teachers require retraining (Brown et al., 2014), particularly at a time when advances in computer science as a discipline are continuous.
- Non-specialist teachers lack confidence (Brown et al., 2014).

1.2.2 Drama

- National Drama receives requests from English teachers asking for support and resources to teach practical drama as they don't have the practical skills/confidence to do this well (Holly Baradell, National Drama, personal correspondence).
- *"I absolutely believe that school-based practice is essential but I think that for some of our teachers, the time to really engage with the theory before they begin in full time teaching is so important. I'm responsible for GTPs, Teach First, Schools Direct and for PGCE students, as well as newly-qualified teachers, at my school. I've seen Schools Direct having very varied experience and teachers who come from GTP route even more variance in the quality of their training. In the past, when employing a new drama teacher I would look for those who came via a PGCE route. I think it makes such a big difference to their ability to develop as a teacher, to reflect and to constantly engage with new thinking. I find the threat of the loss of PGCEs really tragic. It will have a real impact on quality in the long term*" (Mackey & Morrison, 2014).
- *"When you're a one person drama teacher in a school you're utterly reliant on what you have done in your PGCE because there's no one else at school to discuss subject ideas"* (Mackey & Morrison, 2014). If the sole drama teacher in a school were a non-specialist, then they would not be able to rely on their PGCE knowledge.

1.2.3 Maths

- We couldn't find any research on this topic.

1.2.4 Physics

- Whilst it is often assumed that non-specialist teachers encounter problems specific to their lack of speciality, we could not identify any academic (or other) literature to back up this assumption.
- Similarly, we could not find any research evidence that non-specialist teaching affects students' examination performances, negatively or otherwise.

1.2.5 Modern Foreign Languages

- Dual linguists are in demand as an increasing number of schools now offer 2 languages with equal status as first foreign language (Powell, 1990).

1.3 Other information of potential interest

1.3.1 Computer Science & ICT

- Many initiatives have been developed in the computer science community to tackle the problems associated with the number of non-specialist teachers.

1.3.2 Drama

- PGCE students most usually have a first degree in their subject and take a year at university for a teacher training course. Typically, 66% of this is spent in schools on 'teaching practice' with the rest based back at the university, reflecting upon their experience and engaging with subject specialist pedagogy and general education (Mackey & Morrison, 2014, p. 371).

- Numbers of funded PGCE places have diminished drastically over the last decade as successive governments have determined to move teacher training into schools (Mackey & Morrison, 2014, p. 371).

1.3.3 Physics

- Teacher provision varies within the UK. In international comparisons, England and Wales emerge as having shortages, while Scotland and Northern Ireland are reported as balancing supply and demand. Closer inspection, however, reveals a more complicated picture (Smithers & Robinson, 2013, p. 1).
- In England, the provision of science and maths teachers is a very long-standing and deep-seated problem (Devonshire Commission, 1875, & Knight, 1927, cited by Smithers & Robinson, 2013). Over the past 140 years, England has rarely been able to meet its targets for training science and maths teachers. However, recruitment rises with increases in graduate unemployment (Smithers & Robinson, 2013).
- Before the National Curriculum local authorities and schools were able to adjust what was taught to the teachers available. So if there was no physics teacher, then it was likely there would be no serious attempt to teach the subject. Swathes of children missed out. This was particularly the case in the comprehensive schools which had been secondary moderns. In the tripartite system of grammar, technical and modern schools, specialist science graduate teachers were considered essential only in the grammar and the technical schools. Since these together comprised less than a third of the total (technical schools were expensive and at their height took only about 7% of pupils), the shortages were hidden (Smithers & Robinson, 2013).

1.3.4 Modern Foreign Languages

- There has been a declining interest in MFLs and beliefs that there is no 'point' in learning them (Coleman, 2014). Such beliefs are often fostered by the media (Lanvers & Coleman, 2013).
- MFLs are now recognised by HEFCE as SIVS
- Uptake of MFLs is now very low at A-level (e.g. German has fewer candidates than Further Maths) and entries to HE are so low that many university language departments are closing down.

1.4 Research Questions

After little literature was found which could be useful for the development of resources, an empirical study was designed in order to collect the data which could fill the gaps in the literature. The following research questions were of concern:

1. Who are the non-specialist teachers? What are their background characteristics?
2. What problems do non-specialist teachers tend to encounter?
3. What features would non-specialist teachers appreciate in OCR-supplied resources?

The first two questions were asked in the literature review. The third question could now be added as the research would survey teachers directly for their thoughts on this.

2. Method

A survey was developed in order to answer the research questions. This approach would maximise the number of participants compared to a qualitative approach, and would mean that teachers from a wide variety of schools would be able to be surveyed in a relatively short amount of time.

OCR were interested in receiving feedback from teachers of Maths, Physics, Drama and Computer Science/ICT. Throughout the course of this report, ICT will refer to both 'Information Technology' and 'Information and Communication Technology', and these will be distinguished where necessary.

2.1 Questionnaire development

The online questionnaire was developed in conjunction with OCR subject specialists and resource developers. Whilst the researchers were interested in the views of non-specialist teachers in order to assist with resource development for this subset of teachers, the views of specialists were also sought in order to see whether there are any differences between specialists' and non-specialists' responses. Furthermore, the views of heads of department were sought in terms of their experiences of teacher recruitment and supporting non-specialist teachers.

Rather than create three different surveys, one main survey was created where there were three different possible routes, depending on the participant's responses to previous questions. This approach was made possible through the use of Survey Monkey.

This meant that it was easier to disseminate the link to the survey to prospective participants. It also meant that it was possible to 'lock out' those people who had not read the instructions carefully (e.g. teachers of a subject other than those stipulated) by including questions which, if answered in a certain way, would immediately finish the survey and inform the participant that they were not eligible to participate.

2.2 Piloting

As well as being piloted internally within ARD by four research officers, and checked by the relevant OCR subject specialists. OCR specialists suggested potential contacts to use as piloters, which was successful in computing/ICT (a specialist teacher/head of department), drama (head of department) and maths (specialist teacher). Piloters were offered a £10 Amazon voucher or book token for their assistance.

2.3 Reward

Participants were entered into a prize draw for a £100 Amazon voucher or book token. The wording used to contact prospective participants via email or online forums are given in Appendix 1.

2.4 Questions

It is not possible to show all the questions as they appeared in the survey because of the different routing systems used by Survey Monkey. This would make it difficult for the reader to digest. Therefore, Table 2 summarises the questions asked to each of the three different target participants. The questions were the same for participants who taught each of the subjects under consideration. For some questions, heads of ICT/Computer Science departments were asked to answer a question regarding Computer Science teachers separately to their answer for ICT teachers.

Table 2 – Survey questions for each type of participant

Heads of department	Specialist and non-specialist teachers	Non-specialist teachers only
• What subject are they HoD of? • What type of school do they teach in? • What awarding body do they use for GCSE and ALs? • How would they define a NST? • Proportion of non-specialist teachers in their department • How challenging is recruiting specialist teachers in their department? • What key stages do their STs and NSTs teach? • Do NSTs require more support than STs? • What do NSTs find challenging? • What support resources would be helpful for them for managing NSTs? • What is challenging about having NSTs? • Are there benefits to having NSTs?	• How would they define a NST? • What is their degree and teaching qualification? • Do they have other qualifications/experience relevant to the subject? • What type of school do they teach in? • What awarding body do they use for GCSEs and ALs? • How long have they been teaching overall? • How challenging is it teaching students of different key stages? • How often do they teach their specialist and non-specialist subject this year? • What other subjects do/have they taught? • How challenging are certain aspects of teaching that subject? (e.g. marking, predicting performance, feedback) • What support do they have access to? • What support would they like to have access to?	• Which is their NSS? • Why do they consider themselves a NST? • How long have they been teaching their NSS? • What key stages do they teach their NSS in? • What is their specialist subject? • How did they become a NST? • What are the positives in being a NST?

2.5 Different methods of dissemination

It is usually the case that survey links would be sent to centres offering OCR qualifications in the subjects under investigation. However, a different approach was taken in this project in order to:

- **Reduce costs**: Usual methods require temps to be employed to call centres and ask for the email addresses of relevant members of staff.
- **Increase reach**: Through only contacting OCR centres, the number of potential participants can be severely limited. It also requires the person contacted to forward information to their colleagues, which cannot be guaranteed.
- **Increase diversity**: It also means that the views of those who do not teach at OCR centres are not included, when they would nonetheless be equally as useful and interesting. Some OCR qualifications tend to be more popular amongst higher-performing schools, so by not restricting participation to those who teach OCR qualifications, it means that there is a potential for greater diversity in participants (and potentially their responses).

Social media, mailing lists and learned society contacts were used as the primary means of disseminating the link to prospective participants. The following were used:

- **Email**: Mailing lists used by OCR and Cambridge Assessment more generally were used to either include details about the study, or as standalone emails regarding the study.
    - Cambridge Assessment communications, e.g. The Network mailing list (inc. weekly news round-up)
    - OCR marketing mailing lists to relevant participants (e.g. UK schools and teachers) through 'spirit data'
    - OCR subject-specific mailing lists
    - Cambridge Maths mailing list
- **Learned society contacts**: A number of learned societies and associations were contacted and asked whether they could pass on information regarding the study to their members.
    - London Drama
    - Association of Teachers of Mathematics (ATM)
    - National Centre for Excellence in Teaching Mathematics (NCETM)
    - Association for Science Education (ASE)
    - Mathematics in Education and Industry (MEI)
    - Further Mathematics Support Programme (FMSP)
- **Social media**: A variety of different platforms were used to publicise the study in the hope that 'followers' of the OCR and corporate accounts would take part in the questionnaire.
    - Facebook
        - 'Society for Teachers of Speech and Drama' group
        - OCR Drama group
        - OCR Computing/ICT group
        - Corporate account
    - Twitter
        - OCR Drama
        - OCR Computing/ICT
        - OCR Science
        - OCR Maths
        - Cambridge Maths
        - Corporate account
    - Instagram
    - OCR assessors group on Yammer
        - Corporate account
    - Corporate LinkedIn account
- **Online forums**: The researcher posted on open forums with details of the study.
    - TES (Maths, Drama, Science, Computing/ICT, and Head of Department threads were posted on)
    - 'Computing at School' (British Computer Society)
    - TalkPhysics

Participants were asked where they heard about the questionnaire. The results from this question are given in Appendix 2. These show that using social media as a method of publicising research is a worth-while approach, particularly given OCR has very popular Facebook groups for teachers of different subjects which have heavily engaged communities. Corporate and OCR emails were also common sources of information regarding the survey.

2.6 Analysis

Data were downloaded from Survey Monkey into an SPSS file. Time was spent cleaning the data, as some participants were 'locked out' from the questionnaire when responding with answers which showed they were not eligible to take part. Different variables for the same questions via different routes had been created, which meant that a number of variables had to be merged together.

3. Results

Throughout this section, results will be presented in Figures or Tables. In many cases, it would be overwhelming to include the full results tables. Therefore, these have been included in the Appendix, and the reader will be given a brief summary or a Figure for reference.

3.1 Sample

3.1.1 Specialisms

In all, 1094 teachers took part in the questionnaire, with a breakdown of participants by specialism given in Table 3 below. Not all participants answered all questions; therefore, the number of respondents to each question is given in the tables outlining the results for each question.

It is impossible to calculate a response rate because the number of total teachers potentially reached is unknown. Recruitment for participation relied heavily on the use of social media and email, and so it cannot be known how many people were aware of the survey.

Table 3 – Participants by subject and specialism (frequencies)

Complete responses		1094
Physics	Head of department	81
	Specialist	49
	Non-specialist	48
Maths	Head of department	96
	Specialist	162
	Non-specialist	43
Drama	Head of department	165
	Specialist	85
	Non-specialist	22
Computer Science/ICT	Head of department	208
	Specialist Computer Science	60
	Specialist ICT	21
	Non-specialist Computer Science	39
	Non-specialist ICT	15
Heads of department	Maths	96
	Physics	81
	Computer Science and/or ICT	208
	Drama	165
Number of specialists		377
Number of non-specialists		167

3.1.2 School type

Figure 1 shows that most specialist and non-specialist participants taught at state comprehensive schools (72.1%).

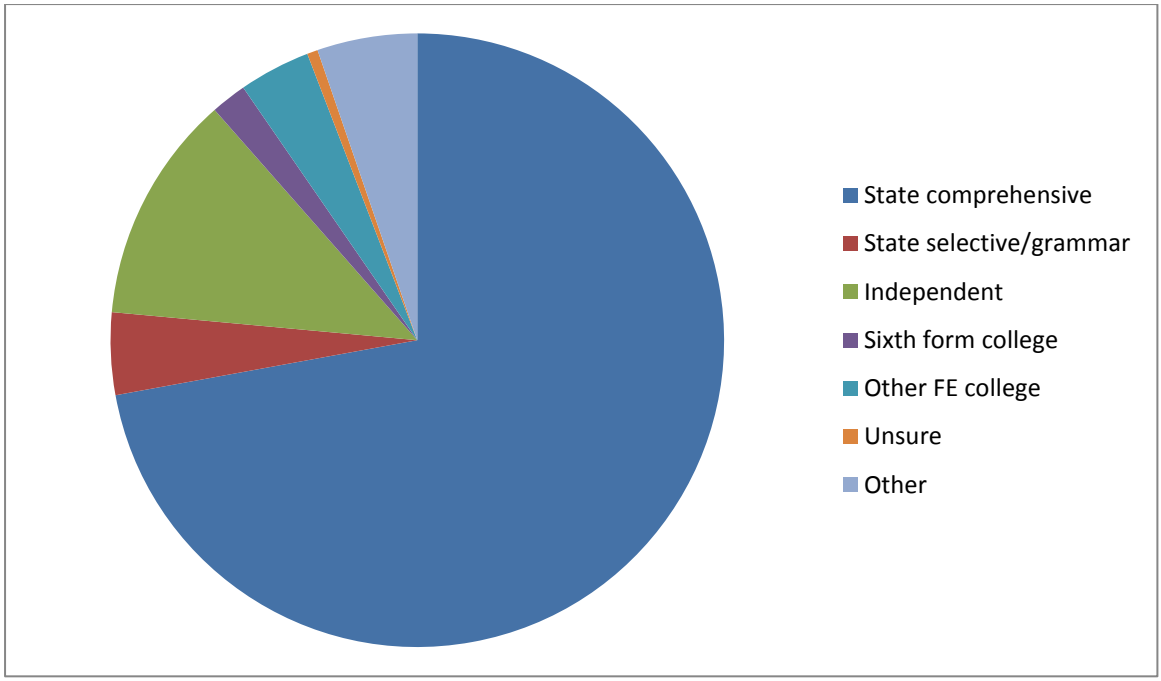

Figure 1 – School types (n=531)

There were no significant differences between subjects. However, it was interesting to note that only 8.2% of non-specialist teachers taught at independent schools, compared to 13.7% of specialist teachers (see Appendix 3).

3.1.3 School region

Figure 2 shows that participants were most commonly from the South East (19.5%) and the East of England (13.0%). A total of 9 participants (0.8%) taught at schools overseas (see Appendix 4).

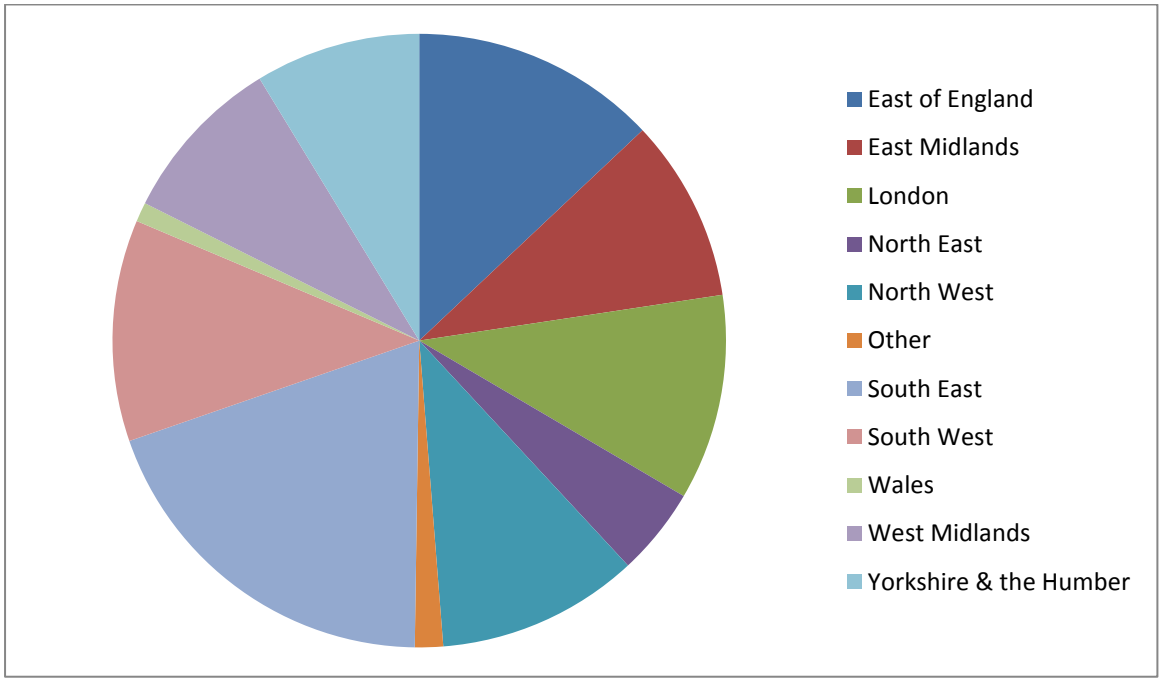

Figure 2 – School regions (n=1079)

3.1.4 Awarding body

Figure 3 shows that, across all subjects, OCR was the most commonly used awarding body at GCSE (42.4%). This was particularly high for Computer Science/ICT (80.4%) and lowest for Maths (15.4%).

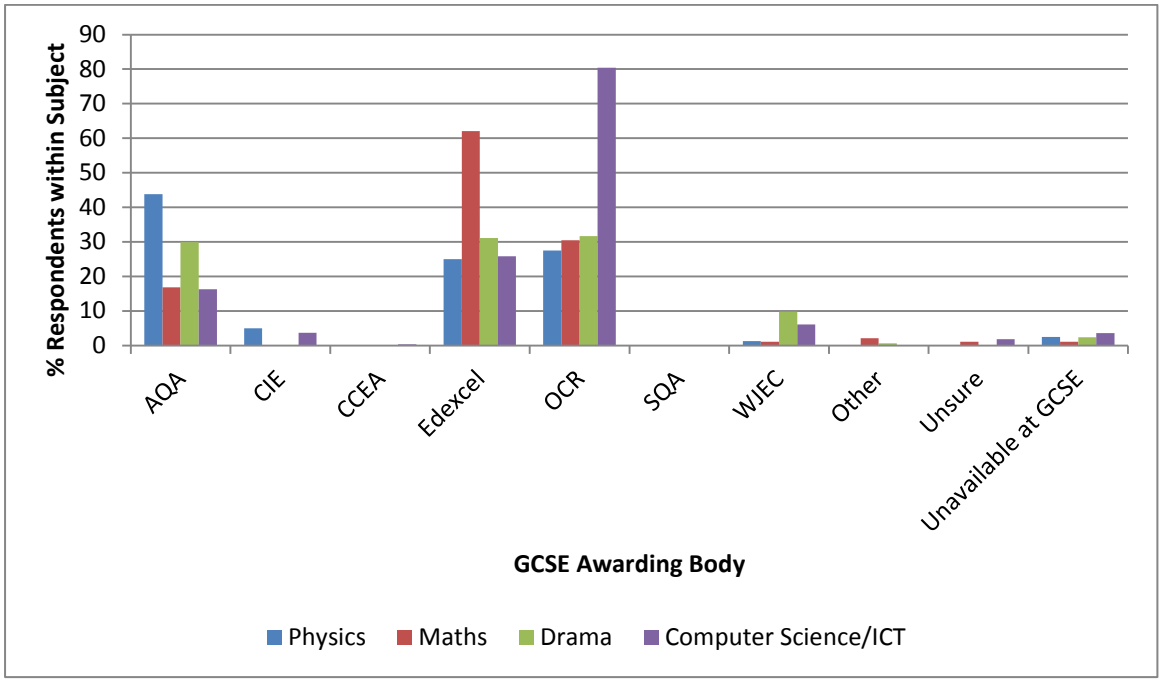

Figure 3 – GCSE awarding bodies

Note: Percentages within each subject may total over 100 as it is possible for schools to use multiple awarding bodies.

High participation from OCR centres was also the case at A-level (see Figure 4). This is likely because a lot of participants completed the questionnaire after seeing it advertised on a popular OCR Computer Science Facebook group, and many Maths participants found out about it via general organisations such as the NCETM and FMSP.

The most commonly used board at A-level was OCR (27.9%). This was highest for Physics (42.6%) and Computer Science (41.0%), but lowest for Drama (12.7%).

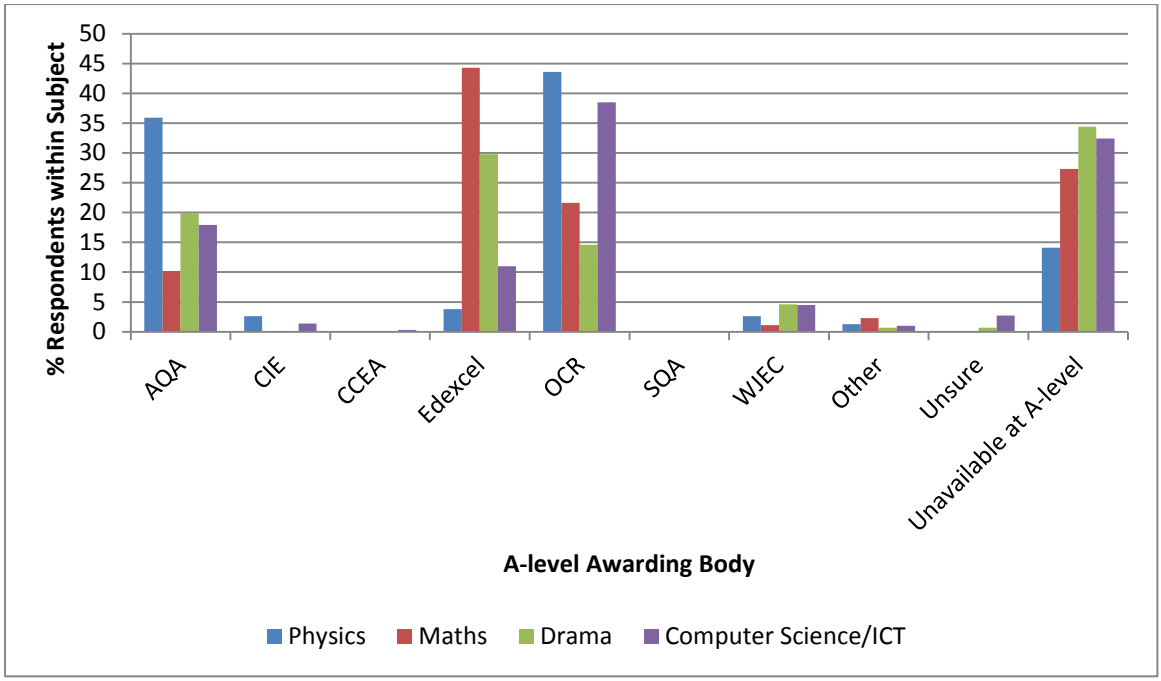

Figure 4 – A-level awarding bodies

There were no significant differences between specialists, non-specialists and head of departments' responses, other than it was more likely for non-specialists to be unsure what awarding body was used (see Appendix 5 & 6).

3.1.5 Teaching experience

Figure 5 shows that it was most common for participants to have been teaching for 3-5 and 6-10 years (22.4% and 22.2%, respectively). There were no significant differences between subjects (see Appendix 7).

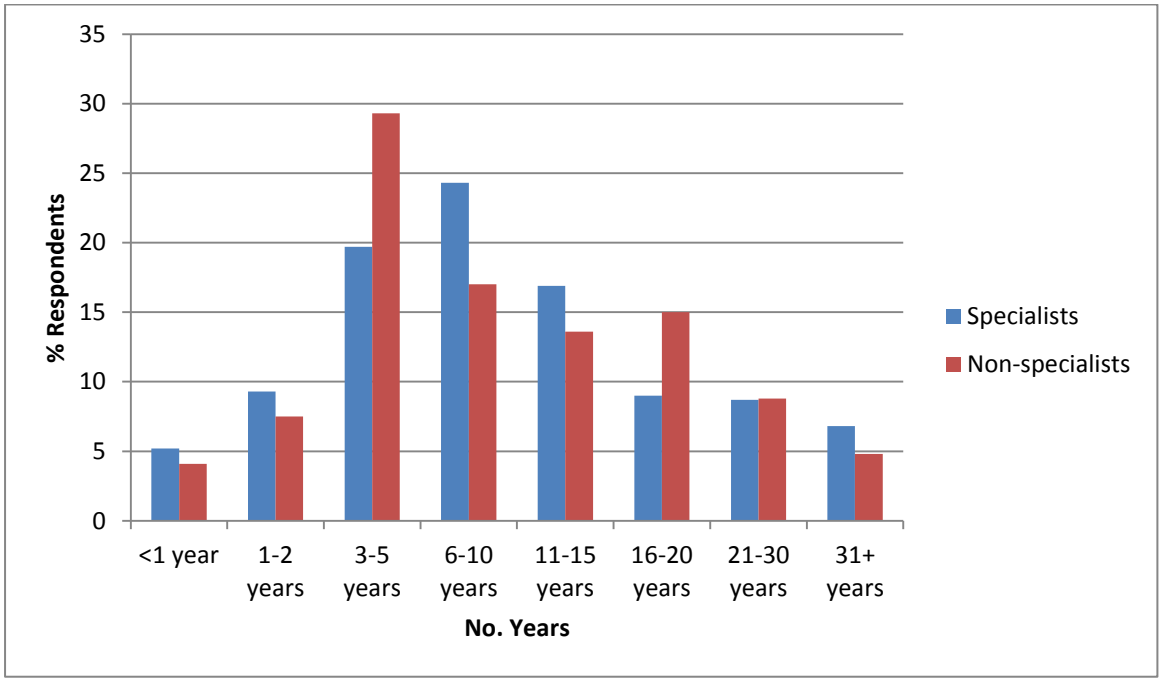

Figure 5 – Number of years teaching experience

There were similar patterns in terms of the number of years of experience that participants had teaching the subject they were being surveyed on (see Figure 6).

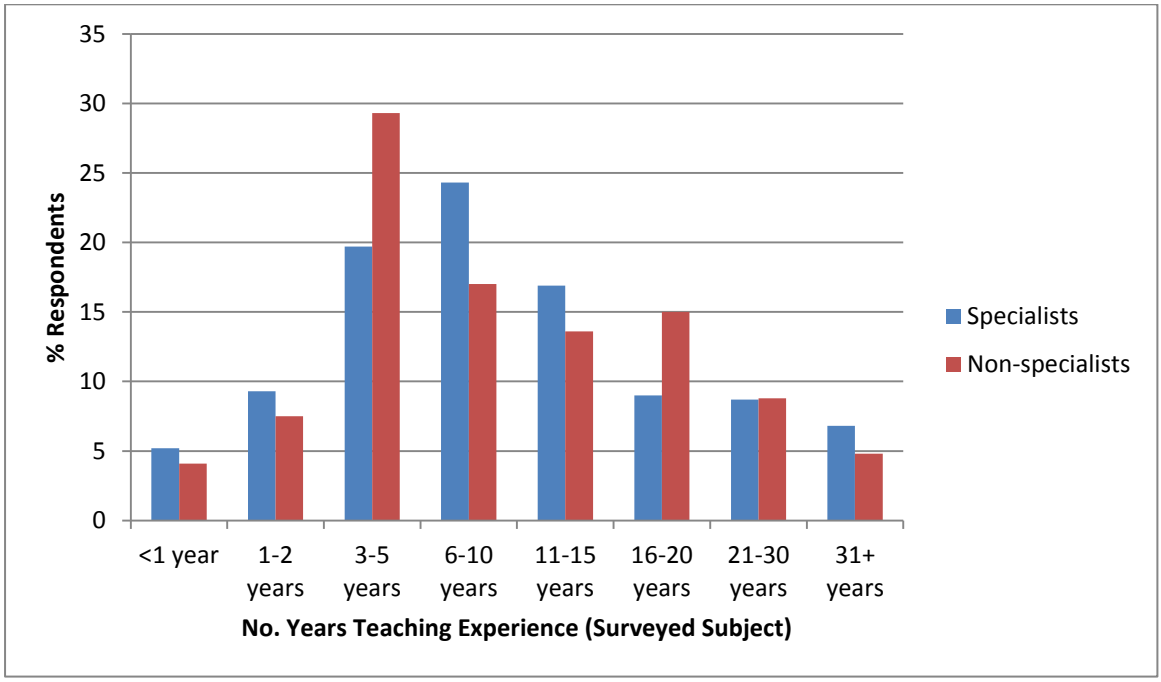

Figure 6 – Number of years teaching experience of the surveyed subject

3.2 RQ1: Who are non-specialist teachers? What are their background characteristics?

3.2.1 What constitutes a non-specialist teacher?

3.2.1.1 Non-specialists' views

Participants were asked what the main reason was for considering themselves a non-specialist teacher from a number of options. Appendix 8 and Figure 7 shows that it was most common for respondents to consider themselves a NST because their degree was in another subject (47.9%). There were no significant differences between subjects.

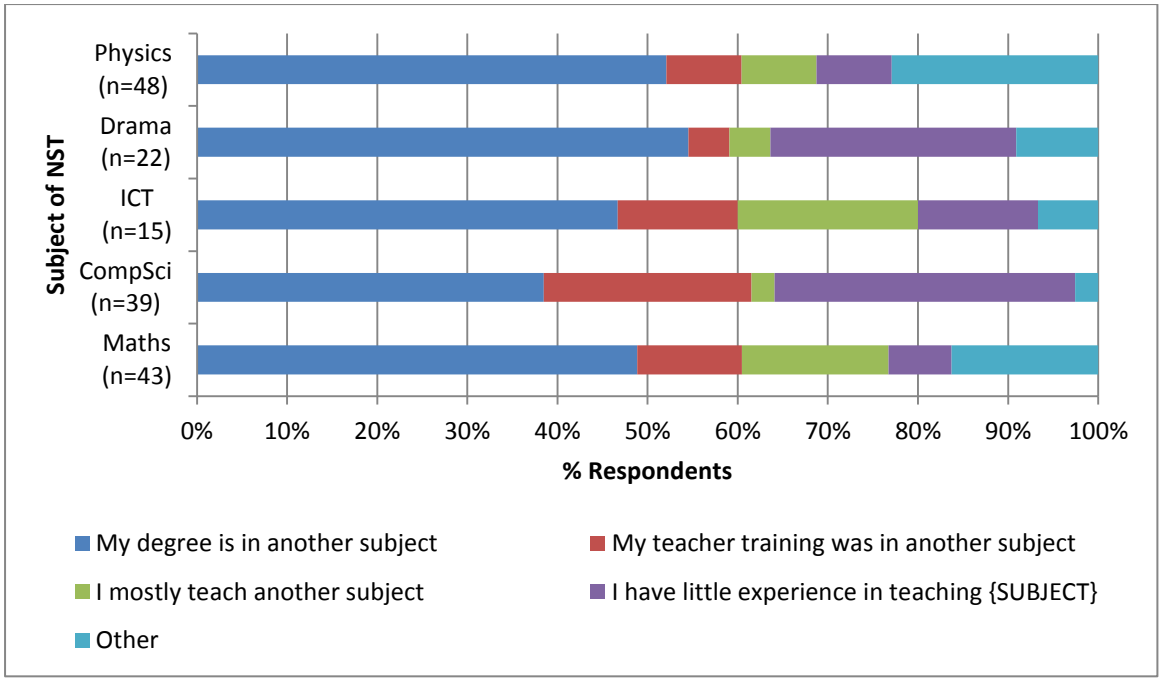

Figure 7 – Main reasons NSTs consider themselves a NST

3.2.1.2 Heads of department views

Heads of department were asked to give their own personal definition of a non-specialist teacher. In total, 538 gave a definition. It was most common for respondents to describe a non-specialist teacher in their area as someone without a degree in that subject (or a closely-related subject) and/or someone without teacher training in that subject.

As well as referring to a lack of teacher or undergraduate qualification, some participants referred to other things: for example a teacher who was inexperienced in that subject, or lacked confidence teaching it.

A teacher who has a brief knowledge of physics but is not comfortable teaching physics because of lack of in-depth subject knowledge/understanding.

Certain definitions seemed to be more common in certain subject areas than others, with additional factors constituting a non-specialist if the teacher did not have a degree or teacher training in the subject:

- Computer Science/ICT:
    - No work/industry experience
    - No understanding of programming languages (CS)
    - Lacks confidence teaching mathematical concepts (CS)
    - Someone who has some basic proficiency in ICT (ICT)
- Drama:
    - No acting experience
    - An English, Music or Dance teacher
    - Lacks confidence
- Physics
    - No A-level Physics
    - A Biology or Chemistry teacher
- Maths
    - No A-level Maths

Four participants referred to how non-specialist teachers are becoming increasingly common. For example:

The norm

An inevitability

Finally, the differences between what constitutes a specialist Computer Science teacher and a specialist ICT teacher were made clear by many responses. This is particularly pertinent given many specialist ICT teachers often go on to teach Computer Science as non-specialists due to changes in the National Curriculum:

A Computer Science non-specialist has not got experience or qualifications in computational thinking, programming, hardware engineering and confidence to teach at the required level. The 'why' of computing. An ICT non-specialist has not the experience or qualifications in applications such as word processing, spreadsheets, graphic and web development and hardware components. The 'how' of computing.

Computer Science – a teacher who does not have a Computer Science qualification OR a programming background (inc. Web Design). Someone who does not know about computer based logic or has ever programmed. IT – a person who has never taught IT, worked in an IT department and doesn't know the skills/functions required to achieve a GCSE in IT.

ICT: A member of staff who has some practical knowledge of how TO DO but not WHY to do. Computing: A member of staff who can deliver an already prepared material to students, but not able to create codes, debug or test for errors during run time.

3.2.2 Why are there non-specialist teachers?

3.2.2.1 Non-specialists' views

Participants were asked how they came to be a non-specialist teacher. This question was left open-ended. In all, 120 participants answered the question: 25 Maths, 22 Computer Science, 9 ICT, 11 Drama and 42 Physics non-specialists. Many respondents gave multiple reasons for becoming a non-specialist. Figure 8 summarises the reasons given.

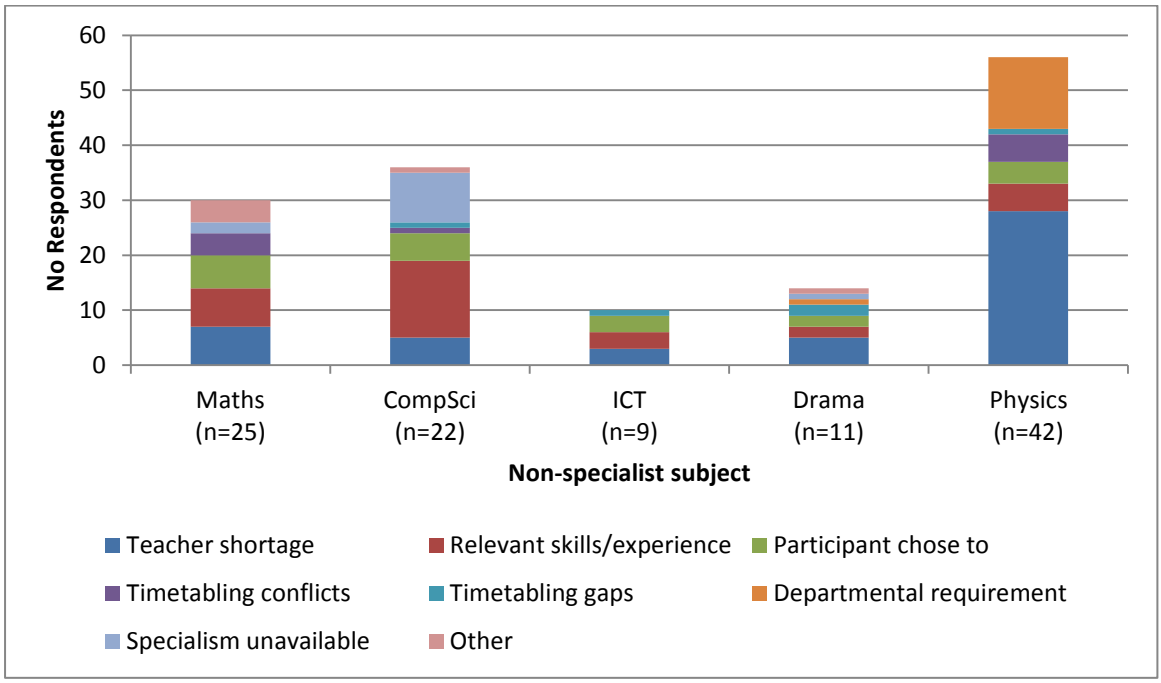

Figure 8 – Main reasons NSTs became an NST

Their reasons were analysed and could be grouped into the following reasons:

1. **Shortage of specialist teachers in that subject (42.5% participants)**
   This was particularly the case for Physics, as 66.7% reported that they had become non-specialist Physics teachers because of shortages of specialist Physics teachers at their school.
2. **They had the relevant skills/experience to teach that subject better than others (31.7% participants)**
   This was most common for Computer Science, as 63.6% reported that they had become non-specialist Computer Science teachers because they had the relevant skills and experience to teach it, even though they didn't have the teaching qualification.
3. **They had asked to teach that subject (18.3%)**
   One-third of ICT non-specialists fell into this category.
4. **Timetabling conflicts (9.2%)**
   Maths non-specialists (16.0%) were more likely to cite this reason than non-specialists of other subjects.
5. **Timetabling gaps (5.0%)**
   This reason was more likely to be given by Drama non-specialists, who reported that they had to fill some teaching time in their specialist timetable, and were able to do that by teaching Drama.
6. **A requirement by their department (10.8%)**
   Explanations for this included a Drama non-specialist who stated that their school's Music and Drama departments were amalgamated meaning that they – as a Music specialist – were expected to also be able to teach Drama. In the case of 31.0% of

Physics non-specialists, the reason cited was because all Science teachers taught combined Science courses and so needed to know Biology, Chemistry and Physics.

7. **Their subject was not available to teach (14.2%)**
   This was a particularly common reason amongst Computer Science non-specialists, with 42.2% reporting that they were ICT specialists who had been forced to change to Computer Science due to changes in the National Curriculum.
8. **Other (5.1%)**
   Additional reasons included:
   - Maths
     i. *Was offered part-time position which suited my needs at the time. Was flexible in what I taught in order to get a part-time position.*
     ii. *I offered tutoring for Biology (GCSE & AS/A level) and found many of the students really struggling with maths as they had no firm foundation on which to build e.g. times tables, ideas of reverse operations…*
     iii. *Through working with special needs pupils in mainstream, PRUs and specialist settings*
     iv. *Initially it was a joint appointment*
   - Computer Science
     i. *Was teaching as a non-specialist and was offered a lead teacher role. Moved schools to become a head of year and also lead computer science.*
   - Drama
     i. *The GTCS would not register me as an English teacher because of a lack of literature in my undergraduate degree. Therefore, I searched for work in the private sector and this job came up. My employer had struggled to find a drama specialist and was happy to hire me partly due to my PGCE in English with Drama, and partly because I have supported extra curricular drama in the past.*

3.2.2.2 Heads of department views

Recruitment

Heads of department were asked whether they had experienced difficulty in the previous 2 years in recruiting specialist teachers. Figure 9 shows that most participants reported that they had experienced difficulty recruiting specialist Physics and Maths teachers (68.9% and 76.7%, respectively). It was most common for respondents to say they had not had to recruit Drama teachers in the last two years (see Appendix 9a).

Heads of Computer Science/ICT generally reported difficulty in recruiting specialist Computer Science and ICT teachers. This was particularly problematic for Computer Science, with 32.5% reporting that they had experienced difficulty recruiting Computer Science specialists, and 30.5% reporting that they had experienced difficulty recruiting both ICT and Computer Science specialists (see Appendix 9b).

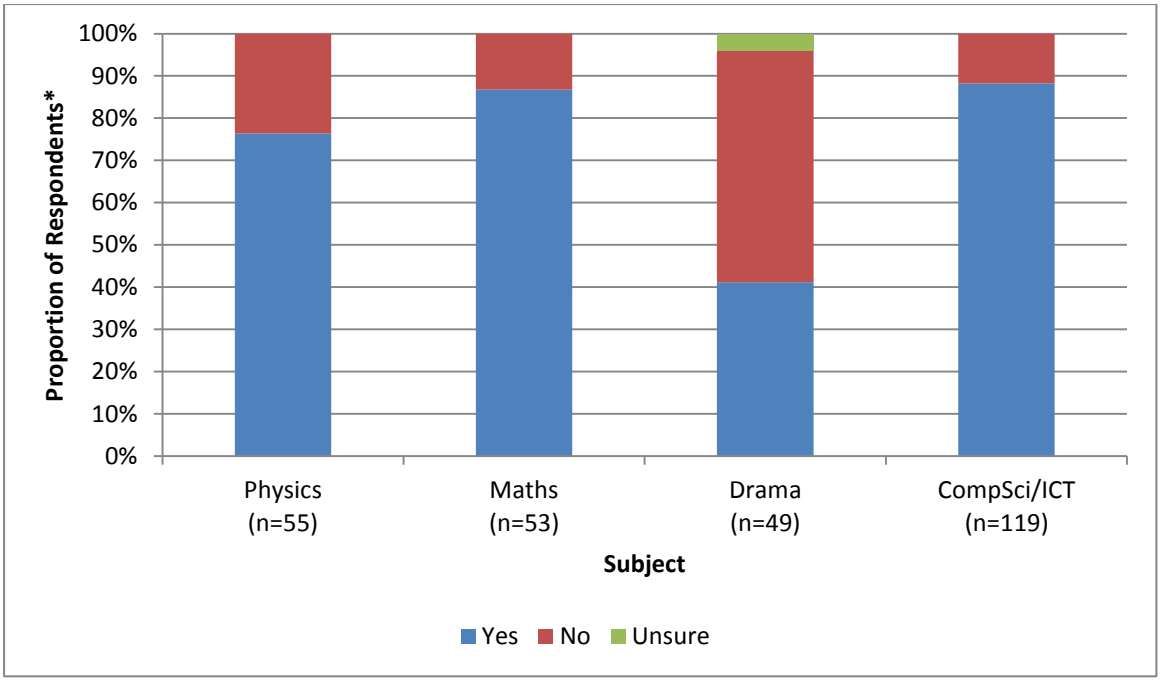

Figure 9 – Have you experienced any difficulty recruiting STs in the last two years?
**Data here exclude participants who selected 'N/A – we haven't had to recruit in the last 2 years'. This may be found in Appendices 9a and 9b.*

Agency staff

It was reasonably commonplace for participants to have resorted to using agency staff (i.e. supply teachers) to cover staff vacancies in their subjects (see Figure 10). Most respondents reported that they had had to use Maths supply teachers (52.5%).

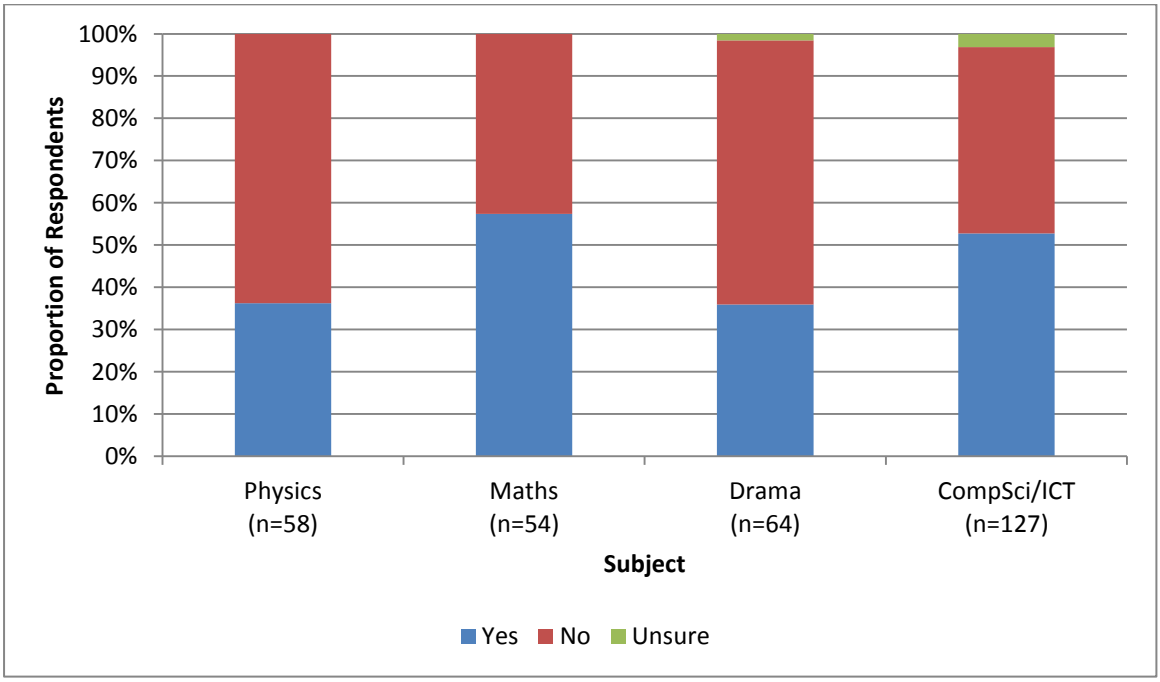

Figure 10 – Have you had to use agency staff to cover vacancies in the last 2 years?
Note: Responses from participants who selected 'N/A – we haven't had to recruit in the last 2 years' have been excluded from this Figure but may be found in Appendices 10a and 10b.

Of the Heads of Computer Science/ICT surveyed, 6.5% reported that they had had to use Computer Science supply teachers, 13.6% had had to use ICT supply teachers, and 23.4% had had to use both Computer Science and ICT supply teachers in the previous two years (see Appendix 10b).

Changes over time

Heads of department were asked how recruitment of specialist teachers had changed compared to two years previously. That is, is it currently more difficult to recruit specialist teachers than in the past? Most reported that it was more difficult now than in the past (see Appendix 11).This was particularly the case for Computer Science, and less problematic in Drama (see Figure 11).

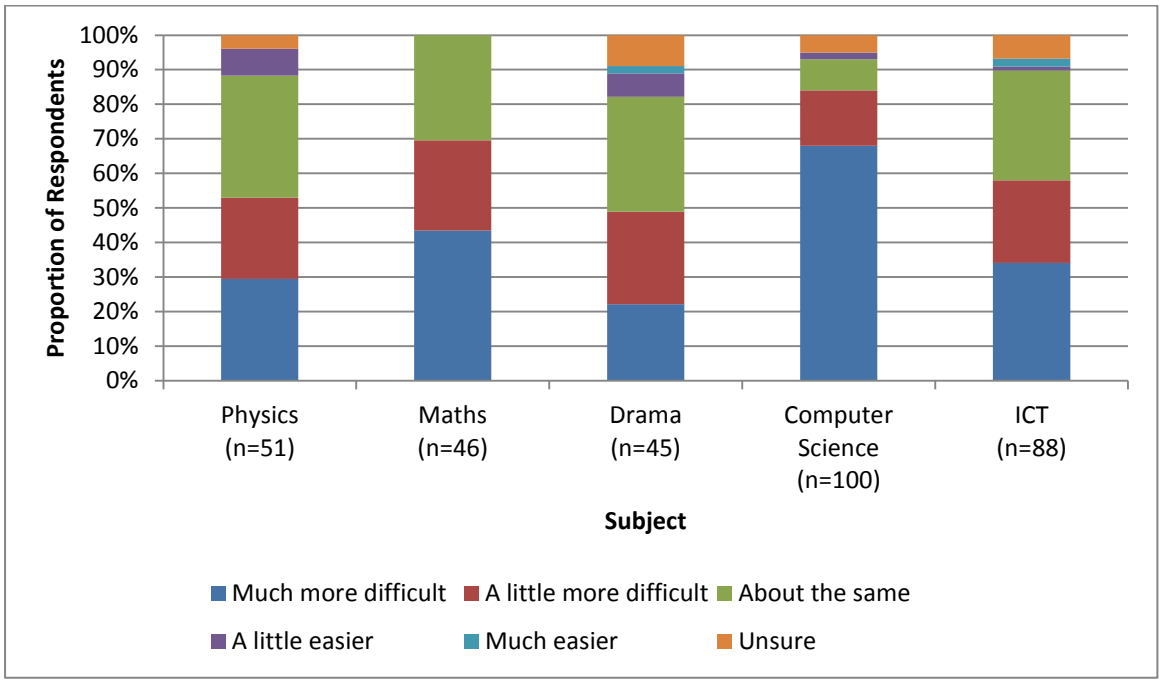

Figure 11 – How easy is it to recruit specialist teachers, compared to 2 years ago?
Note: Participants were given the option to say 'N/A – we haven't had to recruit enough to comment', but these responses have been excluded here.

3.2.3 What qualifications do non-specialist teachers have?

3.2.3.1 Teaching qualifications

Participants were asked what kind of teaching qualification (TQ) they had. Figure 12 shows that, unsurprisingly, most specialist teachers had TQs in their specialist subject (81.8%), and NSTs had TQs in other subjects (70.4%). There were no remarkable differences between teachers of different subjects (see Appendix 12).

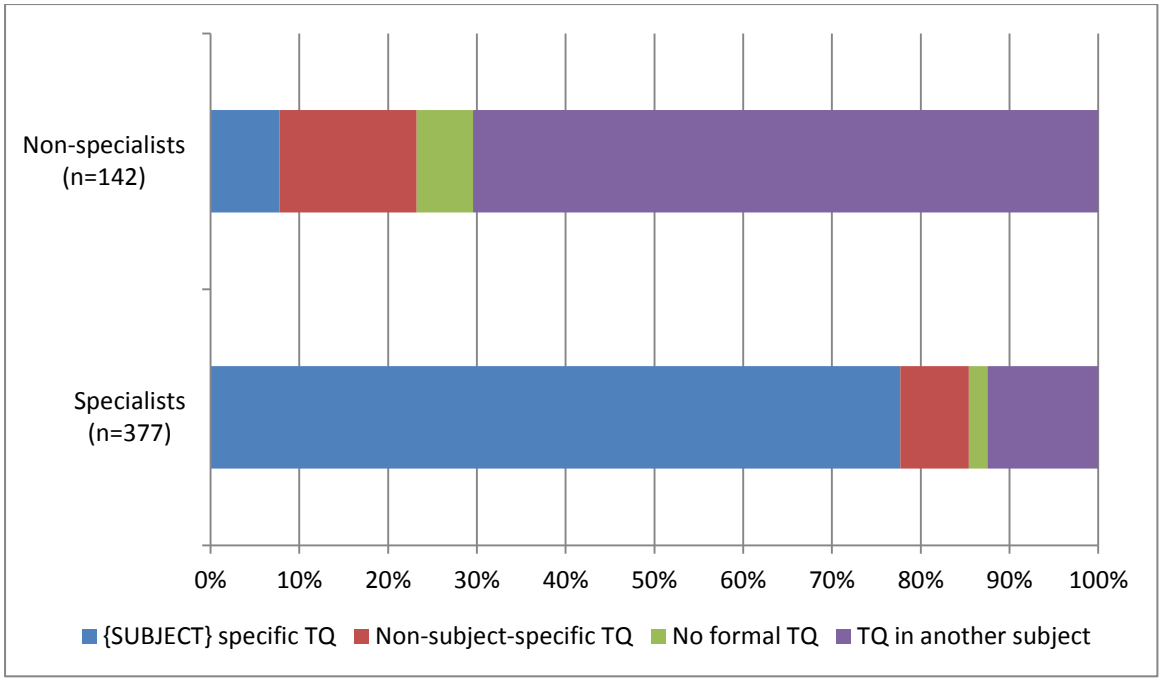

Figure 12 – Teaching qualification held by participants

Non-specialists were also asked what subject their TQ was in if it wasn't in their NSS. The number of respondents to this question was quite small so it isn't possible to make any generalisations. However, Table 4 shows that it was most common for non-specialist Maths teachers to have ICT TQs, for Computer Science teachers to have Maths TQs, and Physics teachers to have Chemistry TQs.

Table 4 – Teaching qualification subject of NSTs who had a teaching qualification in another subject

NST Subject	TQ Subject	Frequency	% (within NSS)
Maths	ICT	4	18.2
	Drama	3	13.6
	Physics	3	13.6
	Science: Physics	3	13.6
	Science	3	13.6
	Art and Design	1	4.5
	Biology	1	4.5
	English	1	4.5
	English and Drama	1	4.5
	Primary Education	1	4.5
	Theatre Studies	1	4.5
Computer Science	Maths	4	30.8
	Business Studies	2	15.4
	Science: Physics	2	15.4
	Business Studies and ICT	1	7.7
	Design Technology	1	7.7
	Geography	1	7.7
	ICT	1	7.7
	Physics and Maths	1	7.7
ICT	PE	2	18.2
	Business Studies	1	9.1
	Design Technology	1	9.1
	Drama	1	9.1
	English	1	9.1
	English and Drama	1	9.1
	Maths	1	9.1
	Movement Studies	1	9.1
	Physics	1	9.1
	Science	1	9.1
Drama	English	3	21.4
	Music	3	21.4
	Science	3	21.4
	Computer Science	2	14.3
	Maths	2	14.3
	Geography, Maths, ICT and Computing	1	7.1
Physics	Chemistry	9	23.7
	Science	7	18.4
	Science: Biology	6	15.8
	Biology and Chemistry	4	10.5
	Biology	3	7.9
	PE	2	5.3
	Biology, Maths and History	1	2.6
	Design Technology	1	2.6
	ICT	1	2.6
	Maths	1	2.6
	Maths and Computing	1	2.6
	Maths, Statistics and Computing	1	2.6
	Science: Chemistry	1	2.6

The degree subjects of NSTs without a TQ in their subject were varied. As the numbers who responded were reasonably low and many different degree subjects were studied, it isn't possible to make generalisations. However, Table 5 shows that it was most common for Maths NSTs to have Biological Sciences or Drama degrees (17.9% each), for Computer Science NSTs to have ICT degrees (28.6%), Drama NSTs to have English degrees (22.2%) and Physics NSTs to have Biological Sciences degrees (51.5%).

Table 5 – Degree subjects of non-specialist teachers by non-specialism

NST Subject	Degree Subject	Frequency	% (within NSS)
Maths	Biological Sciences	5	17.9
	Drama	5	17.9
	Natural Sciences	4	14.3
	Physics	4	14.3
	Chemistry	2	7.1
	Computer Science	2	7.1
	Business Studies	1	3.6
	Classics	1	3.6
	Design Technology	1	3.6
	Economics	1	3.6
	Engineering	1	3.6
	Sociology	1	3.6
Computer Science	ICT	10	28.6
	Business Studies	5	14.3
	Maths	5	14.3
	Business Studies and ICT	3	8.6
	Biological Sciences	2	5.7
	Geography	2	5.7
	Other Science	2	5.7
	Drama	1	2.9
	Economics	1	2.9
	Engineering	1	2.9
	French	1	2.9
	Geography and Economics	1	2.9
	Psychology	1	2.9
ICT	Biological Sciences	2	20.0
	Drama	2	20.0
	American Studies and Film Studies	1	10.0
	Design Technology	1	10.0
	English and Drama	1	10.0
	English	1	10.0
	Maths and Art	1	10.0
	Physics	1	10.0
Drama	English	4	22.2
	Geoscience	2	11.1
	ICT	2	11.1
	Maths	2	11.1
	Music	2	11.1
	Biological Sciences	1	5.6
	Chemical Engineering	1	5.6
	Computer Science	1	5.6
	Dance	1	5.6
	Religious Studies	1	5.6
	Sociolinguistics	1	5.6

NST Subject	Degree Subject	Frequency	% (within NSS)
Physics	Biological Sciences	17	51.5
	Chemistry	4	12.1
	Maths	4	12.1
	Engineering	2	6.1
	Science Education	2	6.1
	Classics	1	3.0
	ICT	1	3.0
	PE	1	3.0
	Theatre Arts	1	3.0

Note: Some specific degree titles have been simplified and merged in this table for clarity.

3.2.3.2 Qualifications taught by non-specialists

Whilst it is possible that many pupils are taught by non-specialists, the implications of this can differ depending on at what point in their education they are taught by non-specialists. For example, would it be as great of a concern if a Year 7 child is taught Maths by a Physics specialist, compared to an A-level student being taught Maths by a Geography specialist?

Figure 13 shows that, whilst the majority of both specialists and non-specialists had taught their subject at KS3 and GCSE in the last two years, considerably fewer non-specialists had taught A-level than specialists.

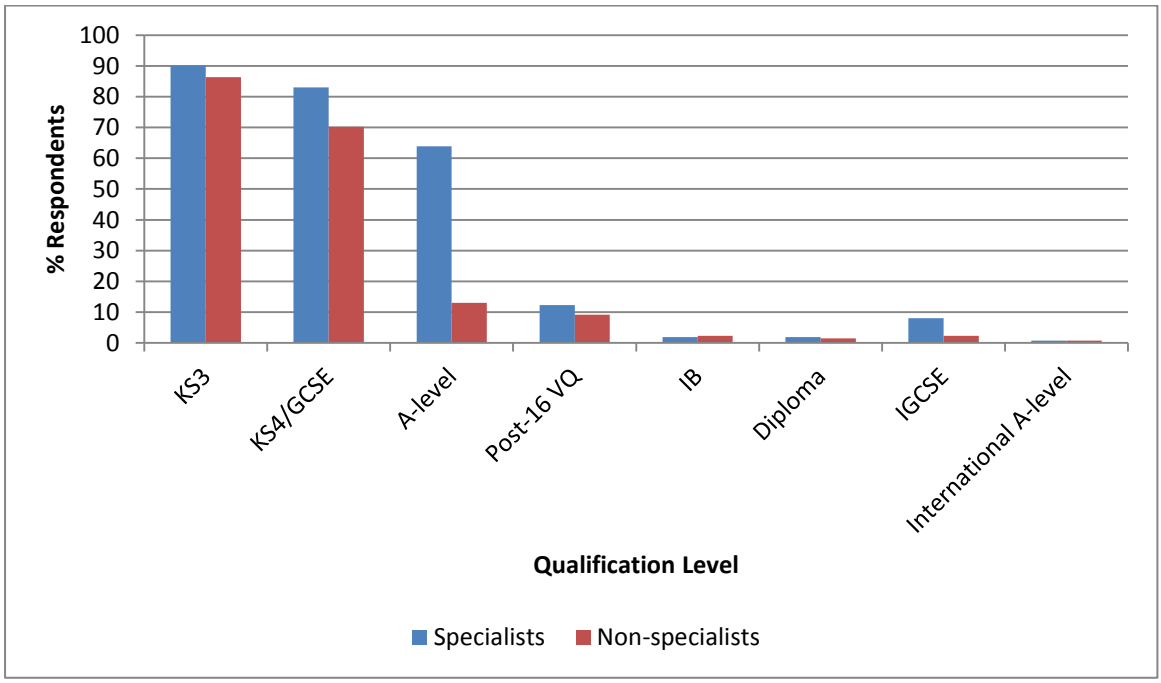

Figure 13 – Qualifications/levels of education taught by specialists vs non-specialists

Overall, most participants reported that they had taught the subject that they were being surveyed about at KS3 in the last 3 years (89.1%), closely followed by GCSE/KS4 (87.1%). However, only 13.0% of non-specialist teachers reported teaching A-level compared to 63.9% of specialist teachers. Additionally, 93.0% of specialist teachers reported teaching their subject at GCSE/KS4, compared to 70.2% of non-specialists.

There were no significant differences in responses between subjects (see Appendix 13).

3.2.3.3 Frequency teaching non-specialist subjects

Specialist teachers were more likely to report having taught their subject 'all of the time' this academic year (69.4%) compared to non-specialists (30.8%). Nonetheless, 56.2% of non-specialists reported that this academic year they would teach their non-specialist subject for the majority of their time (see Figure 14). There weren't any significant differences between participants who taught different subjects (see Appendix 14).

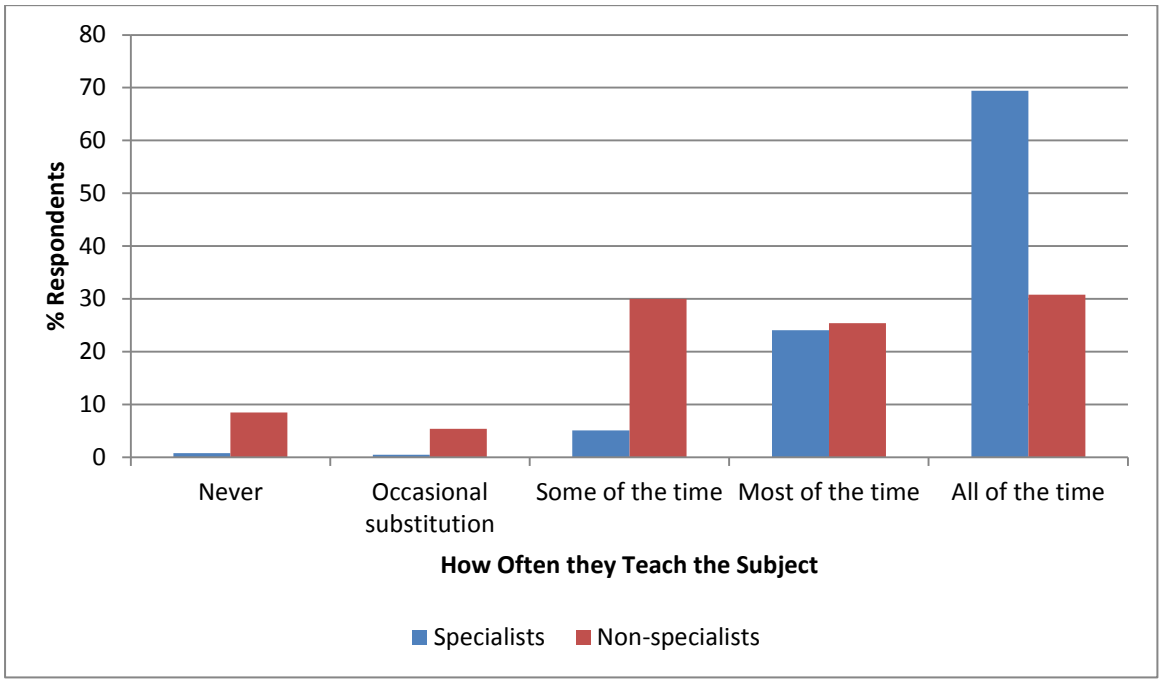

Figure 14 – Regularity with which participants taught their subject

3.2.3.4 Other subjects taught by specialists and non-specialists

Both specialists and non-specialists were asked what other subjects – if any – they currently taught. For the 285 participants who answered this question, the number of other subjects[1] ranged between 0 and 5, with a mean of 1.24 and median of 1. In all, most participants (52.6%) taught one additional subject to that which they were answering the questionnaire about. Nearly one-quarter (24.6%) taught two additional subjects (see Appendix 15).

Participants were asked which other subjects they taught (see Table 6, below). The most common additional subjects taught by Physics teachers were Biology (50 respondents) and Chemistry (43 respondents). Many Drama teachers also taught English (24 respondents), Dance (11 respondents) and Music (10 respondents). There was a wide variety of subjects taught by Maths teachers, with the most common being Science (9 respondents), English (7 respondents), Computer Science/ICT (5 respondents each). Computer Science teachers were most likely to also teach ICT (39 respondents) or Business Studies (13 respondents). ICT teachers were most likely to also teach Computer Science (4 respondents).

[1] Subjects such as PSHE and its variants, Citizenship, and Careers and its variants were all discounted.

Table 6 – Other subjects taught by participants this term (frequency by subject of concern)

	Physics			Maths			Drama			CompSci			ICT			Total
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	
Applied Science	1		1													1
Art							2		2							2
Astronomy	1		1													1
Biology	24	26	50		2	2					1	1		1	1	54
Business Studies					1	1				4	9	13	1	1	2	16
Chemistry	22	21	43	1	1	2					1	1		2	2	48
Childcare							1		1							2
Classical Civilisation										1		1				2
Computer Science				2	3	5		1	1				4		4	20
Creative iMedia										1		1		1	1	2
Dance							11		11							11
Design Technology										1		1				1
Digital Applications										1		1				1
Drama														1	1	1
Electronics	2	1	3								1	1				4
Engineering											1	1		1	1	2
English				1	6	7	23	1	24					1	1	32
Environmental Systems		1	1													1
Extended Project	1		1	1		1										2
Food Technology										1		1				1
French										1		1				1
Functional Skills (English)				1		1										1
Functional Skills (Maths)													1		1	1
Geography					2	2				2	2	4				6
Geology	1		1													1
German				1		1										1
GPR							1		1							1
Graphics										1		1		1	1	2
History	1	1	2				1		1		1	1				4
ICT		1	1		5	5		1	1	33	6	39				46
Literacy				1	1	2	3		3							5

	Physics			Maths			Drama			CompSci			ICT			Total
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	
Maths	4	2	6					1	1	3	2	5	1			13
Media							3	1	4	1		1	3			8
Music							10		10							10
PE					1	1	1		1							2
Physics				2	2	4										4
Production Arts														1	1	1
Programming														1	1	1
Psychology		1	1													1
Resistant Materials										1		1				1
Religious Studies		1	1				4		4	1	1	2				7
Science	5	4	9	2	7	9				2		2				20
Sociology							1		1							1
Speech							1		1							1
Statistics				1	1	2										2
Technology										1		1				1
Textiles							1		1							1
Travel & Tourism										2		2				2
Total	49	48	97	158	43	201	79	20	99	60	37	97	19	15	34	528

Note: Certain subjects were consolidated into one. For example, Electronics and Electronic Products have both been included in this table under 'Electronics', or Religious Studies and Religious Education merged into 'Religious Studies', for example.

3.3 RQ2: What problems do non-specialist teachers tend to encounter?

3.3.1 Which aspects of teaching do teachers find difficult?

3.3.1.1 Teachers' views

The following figures depict the responses participants gave to a group of questions regarding how difficult they found certain aspects of teaching their subject. The same question was asked to specialists and non-specialists, so that comparisons could be made. Participants were asked to choose one option from 'very easy', 'quite easy', 'manageable', 'quite difficult', 'very difficult' and 'not applicable'. The figures exclude responses from participants who selected 'not applicable'; however, the proportions of participants who chose this option are shown in the tables in the appendix which support the figures.

Figure 15 shows that it was most common for specialist teachers to report that teaching subject-specific skills was very easy (43.5%), whereas it was most common for non-specialists to report that it was only 'manageable' (45.9%). There were no remarkable differences between subjects (see Appendix 16).

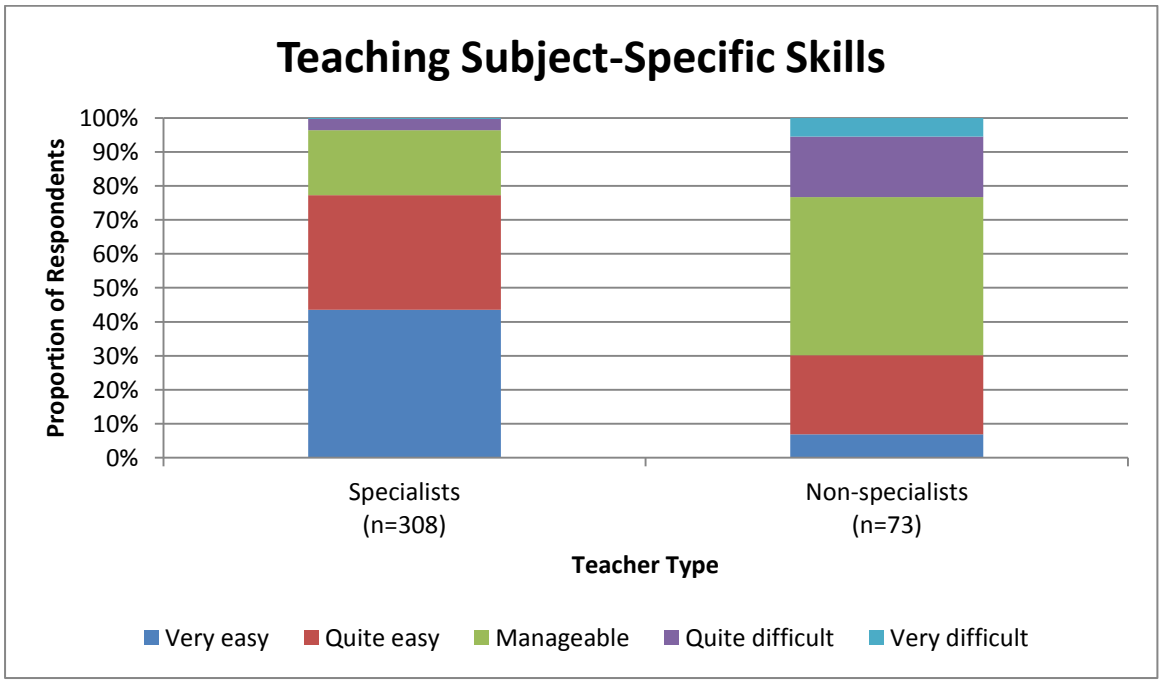

Figure 15 – Difficulty perceived by participants in teaching subject-specific skills

It was a similar story for how challenging teachers perceived teaching subject-specific content to be, with 46.3% of specialists describing this as 'very easy' and 40.8% of non-specialists describing it as 'manageable' (see Figure 16 and Appendix 17).

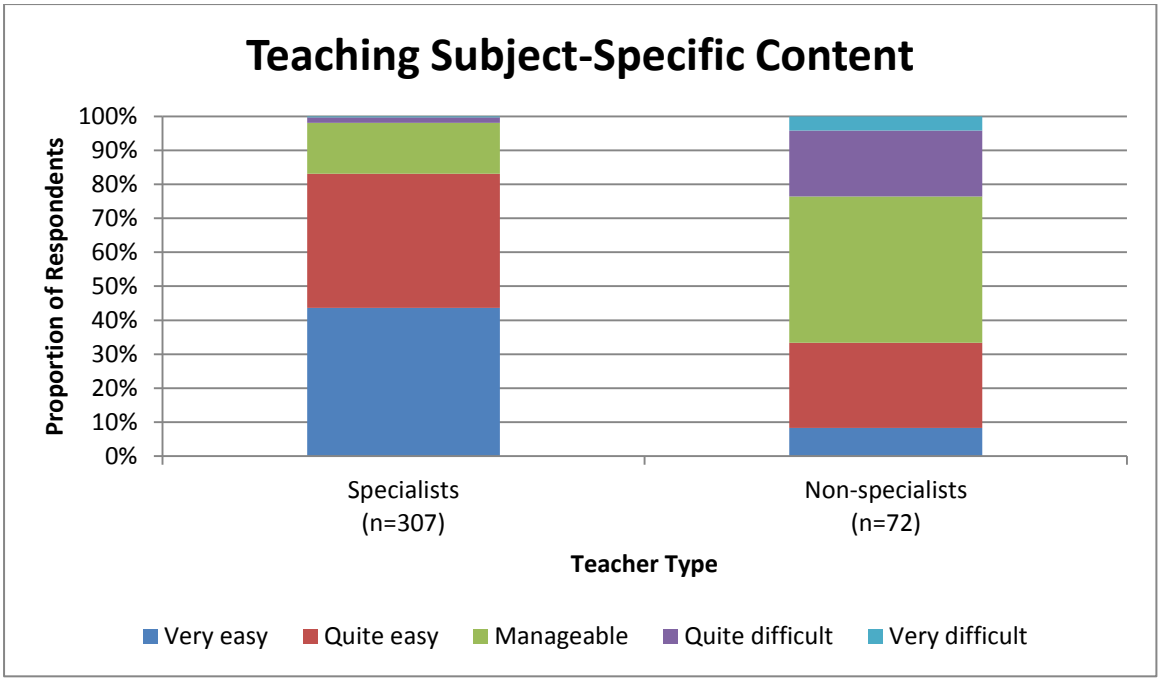

Figure 16 – Difficulty perceived by participants in teaching subject-specific content

Figure 17 shows that there weren't any notable differences between specialists and non-specialists in terms of how difficult they find behaviour management. It was expected that there might differences between specialist and non-specialist Drama teachers in this because the practical nature of Drama means that teachers have an additional challenge; however, only two non-specialist Drama teachers answered this question, so no reasonable comparisons can be drawn (see Appendix18).

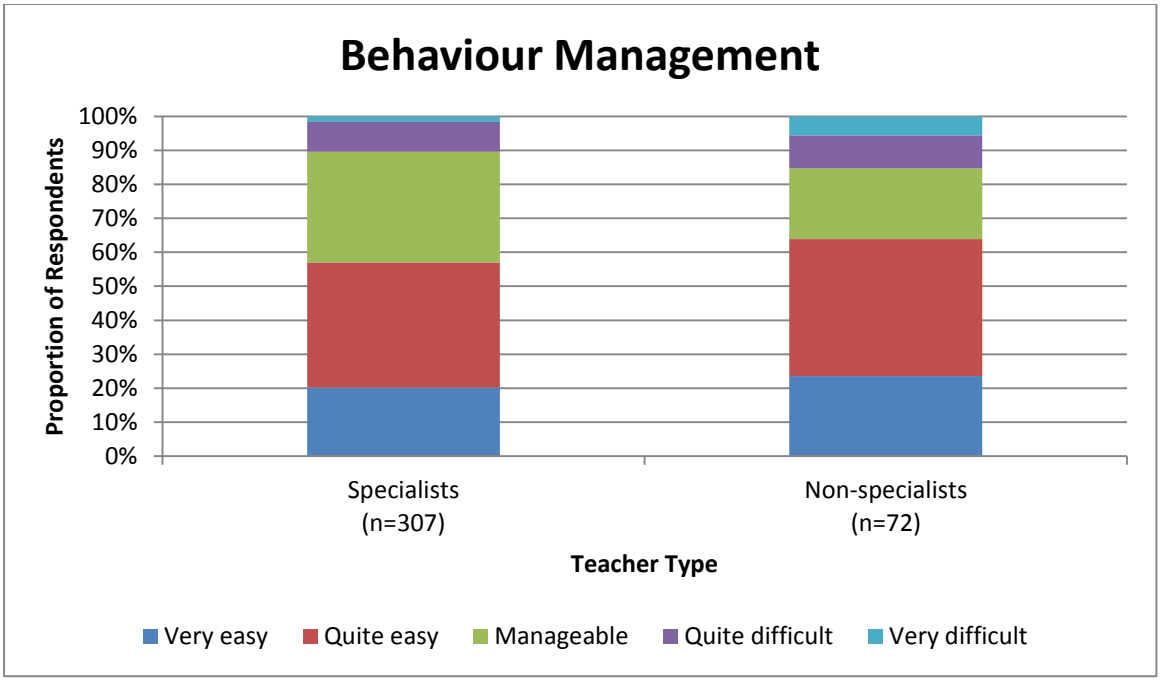

Figure 17 – Difficulty perceived by participants in behaviour management

Figure 18 shows that specialists most often described setting practical work as quite easy (36.8%), whereas non-specialists most often described it as manageable (46.4%). There were no significant differences in the responses of teachers of different subjects (see Appendix 19).

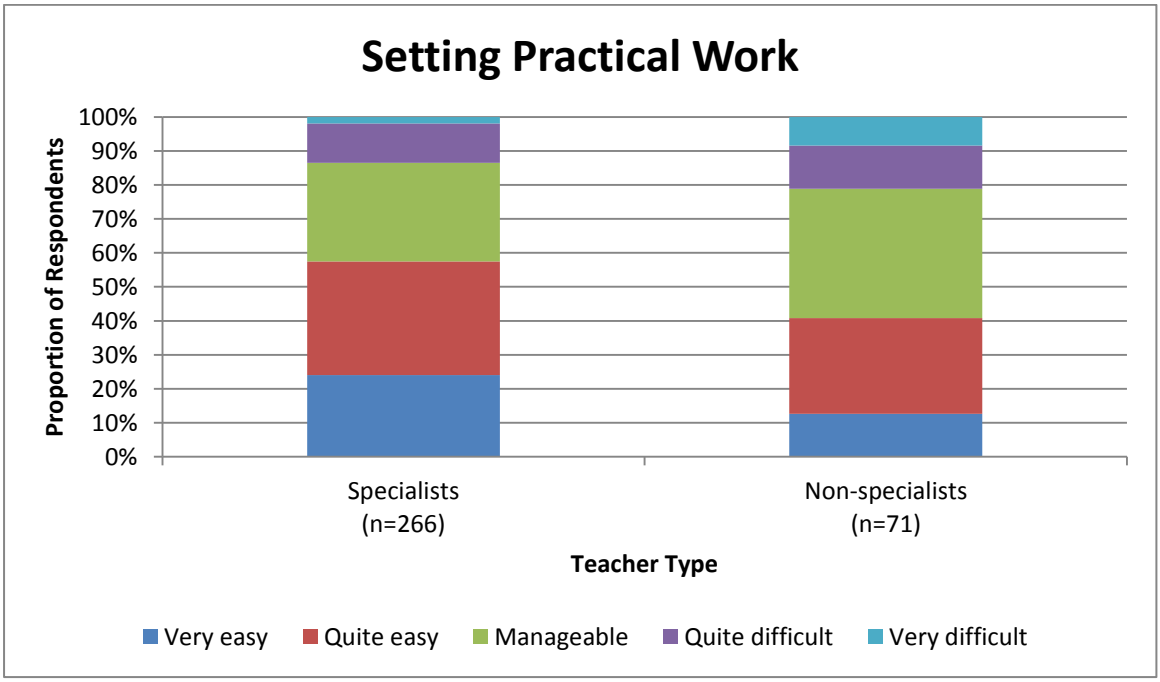

Figure 18 – Difficulty perceived by participants in setting practical work

Marking practical work was most commonly perceived by both specialists and non-specialists to be manageable (see Figure 19 and Appendix 20).

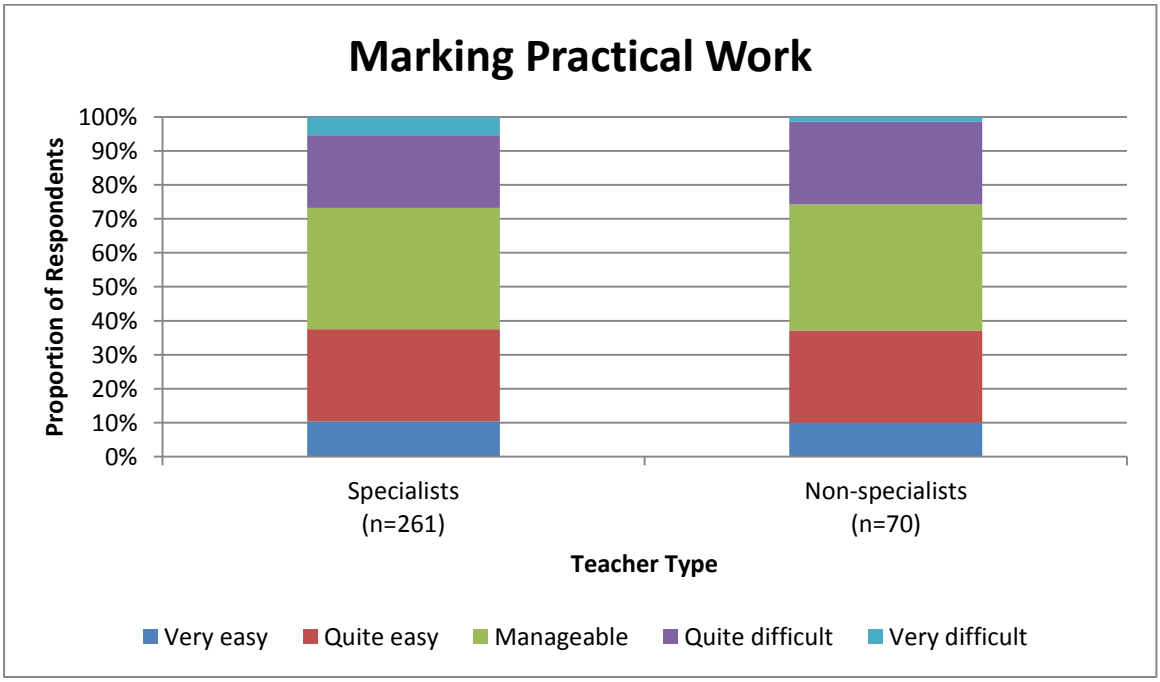

Figure 19 – Difficulty perceived by participants in marking practical work

Setting classwork and homework was described by 19.7% of specialist Drama teachers as quite difficult (see Appendix 21); however, the proportion who chose this option was much lower in other subjects (2.6% in Physics, 2.2% in Maths, 7.7% in Computer Science, 6.7% in ICT). For the most part, it was most common for specialists to describe this as 'quite easy' (including amongst Drama teachers) but for non-specialists to describe this as 'manageable' (see Figure 20).

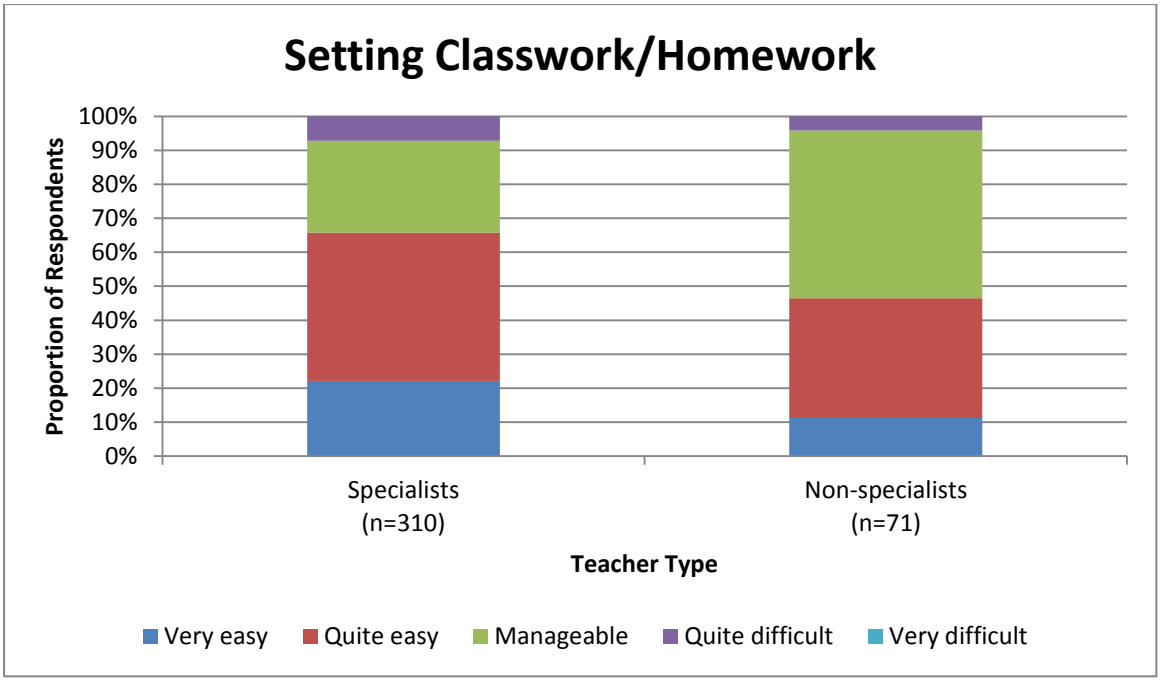

Figure 20 – Difficulty perceived by participants in setting classwork/homework

Marking classwork/homework was described by 40.0% of specialist ICT teachers as 'quite difficult' (see Appendix 22). However, only three non-specialist ICT teachers answered this question so meaningful comparisons can't be made. Across other subjects, it was most common for participants to describe this as 'manageable' (40.9% Physics teachers, 38.4% Maths teachers, 43.5% Drama teachers, 48.1% Computer Science teachers). Overall, there were no significant differences between the responses of specialists and non-specialists (see Figure 21).

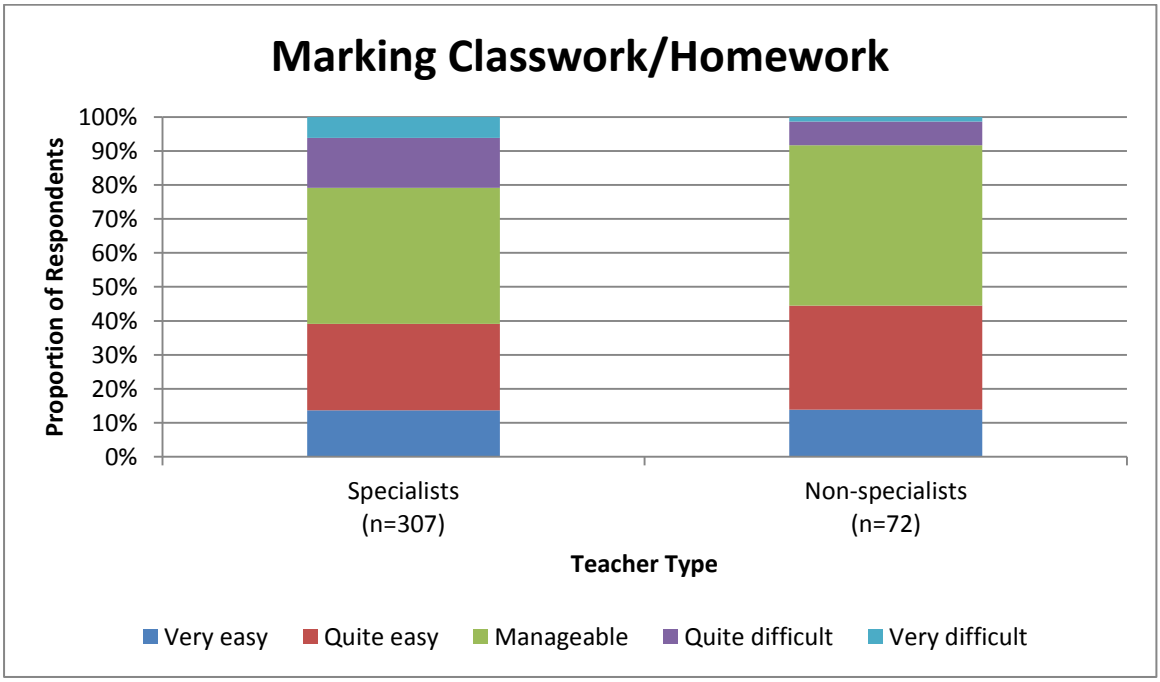

Figure 21 – Difficulty perceived by participants in marking classwork/homework

Setting controlled assessment tasks didn't prove to be too difficult for most participants (see Figure 22); however, a significant minority of non-specialists found it either quite difficult or

very difficult . There were no noteworthy differences between teachers of different subjects (see Appendix 23).

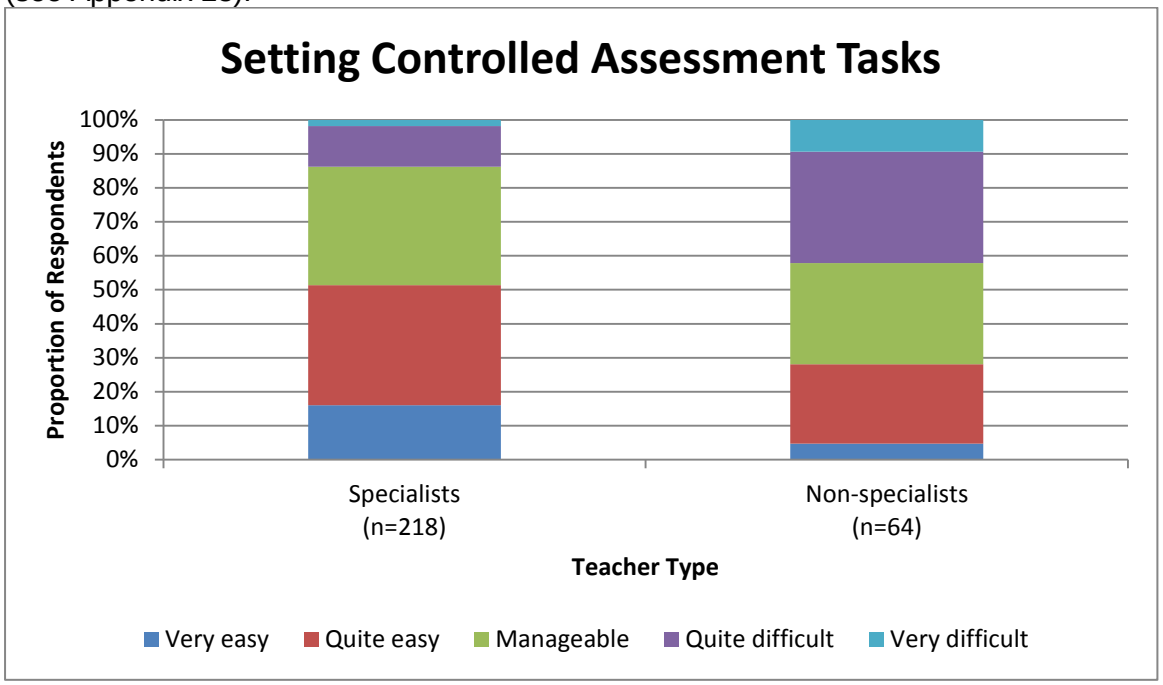

Figure 22 – Difficulty perceived by participants in setting controlled assessment tasks

However, marking controlled assessment was perceived as 'quite difficult' by significant minorities of respondents, especially non-specialists (see Figure 23). Appendix 24 shows that a total of 42.9% of non-specialist Physics teachers described it as quite difficult (compared to 23.7% specialists). Over one-quarter of specialist Drama and Computer Science teachers (28.4% and 26.9%, respectively) described it as quite difficult.

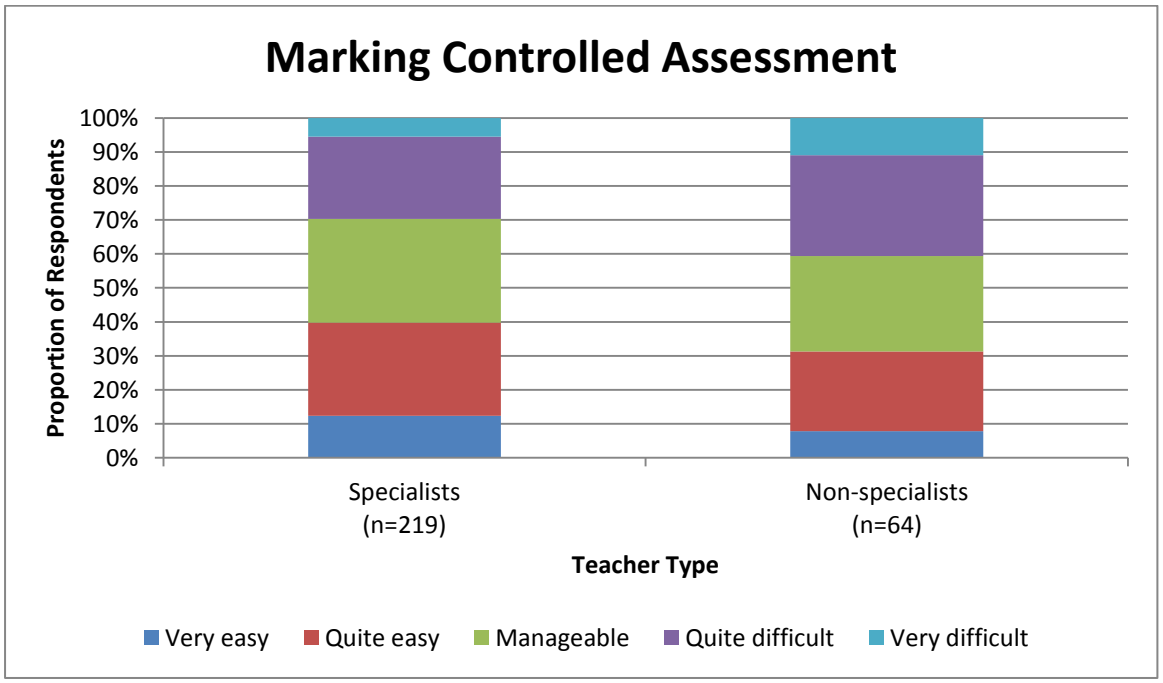

Figure 23 – Difficulty perceived by participants in marking controlled assessment

Moderating assessment was viewed as more challenging by non-specialists than specialists (see Figure 24). Whilst it was most common for both specialists and non-specialists to describe this as 'manageable' (28.3% and 29.7%, respectively), 14.0% of specialists and

27.0% of non-specialists described it as ‘quite difficult’. There were no significant differences between teachers of different subjects (see Appendix 25).

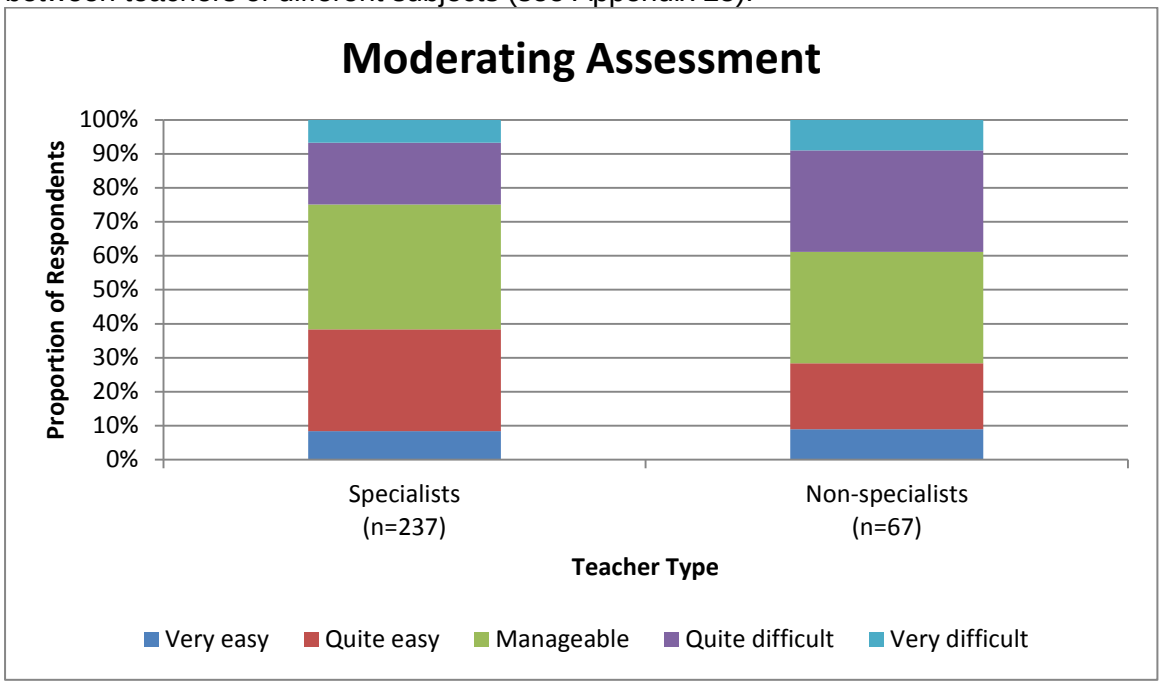

Figure 24 – Difficulty perceived by participants in moderating assessment

Figure 25 shows that setting mock assessments was generally viewed as being manageable or easy. There were no significant differences between teachers of different subjects (see Appendix 26).

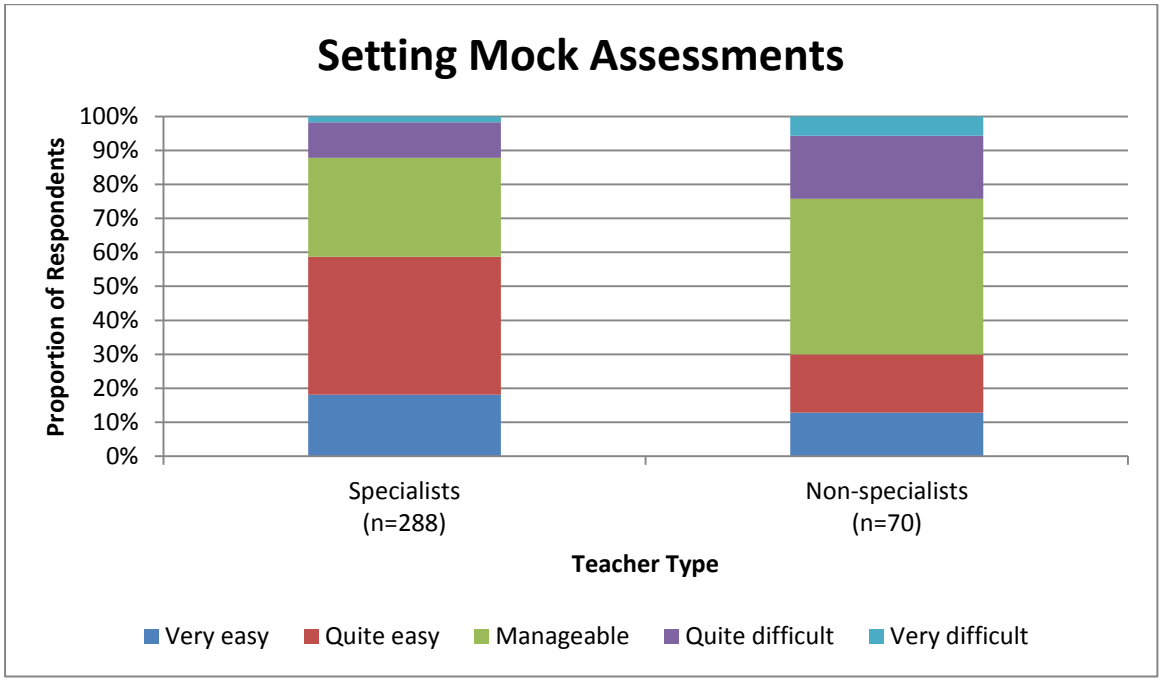

Figure 25 – Difficulty perceived by participants in setting mock assessments

Specialists found it slightly easier to mark past papers than non-specialists (see Figure 26). Appendix 27 shows that this was particularly the case in Physics, where it was most common for participants to describe this as very easy (42.1%) or ‘quite easy’ (44.7%), whereas it was most commonly described by non-specialists as ‘manageable’ (46.4%).

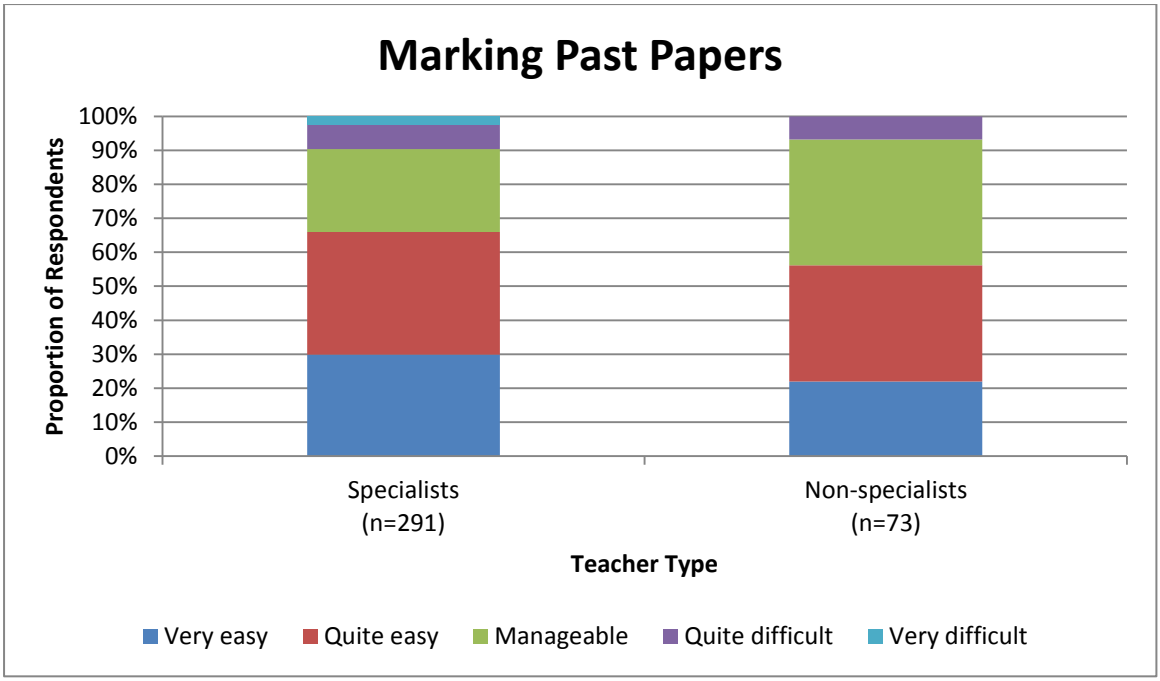

Figure 26 – Difficulty perceived by participants in marking past papers

Generally, both specialists and non-specialists found answering students' questions manageable or easy (see Figure 27). However, specialist teachers tended to more commonly describe this as very easy (39.5%) than non-specialists (5.3%), who most often described this as 'manageable'. There were no significant differences between subjects (see Appendix 28).

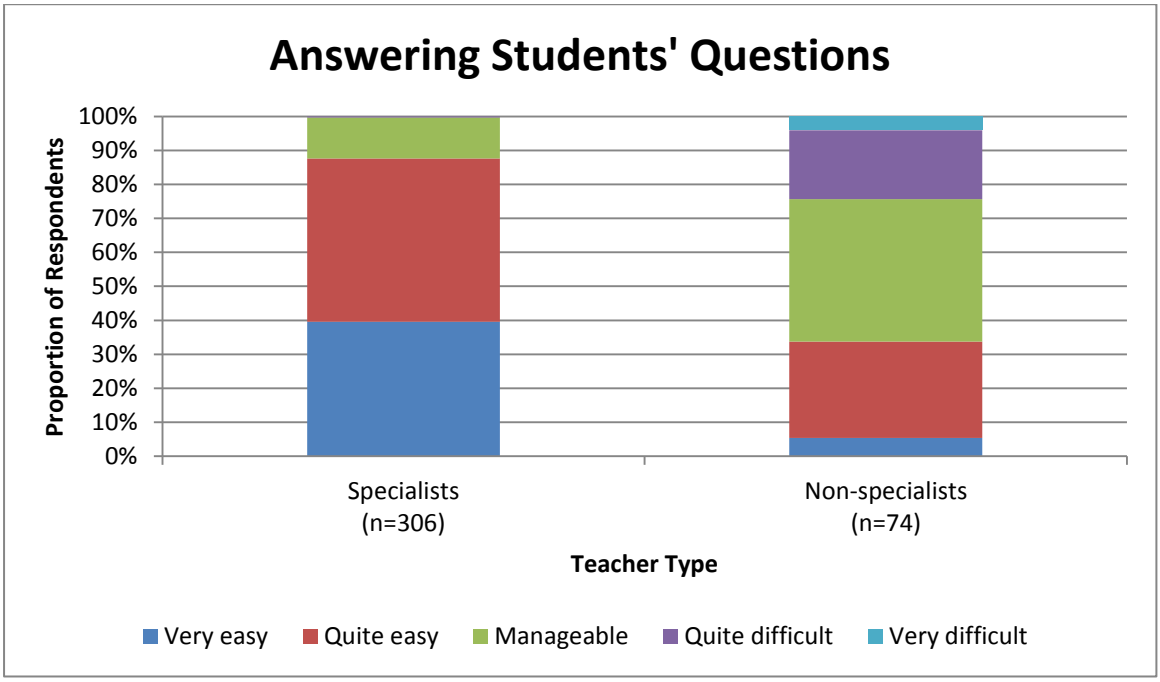

Figure 27 – Difficulty perceived by participants in answering students' questions

Predicting performance was more difficult for non-specialists than specialists (see Figure 28). Appendix 29 shows that, for example, 32.1% of non-specialist Physics teachers described this as 'quite difficult' compared to just 13.2% of specialists. Similarly, 52.0% of non-specialist Computer Science teachers described it as 'quite difficult' compared to 25.0% of specialists and 37.5% of non-specialist Maths teachers described it as such compared to

just 12.6% of specialists. Only 6.0% of all respondents described predicting performance as 'very easy'.

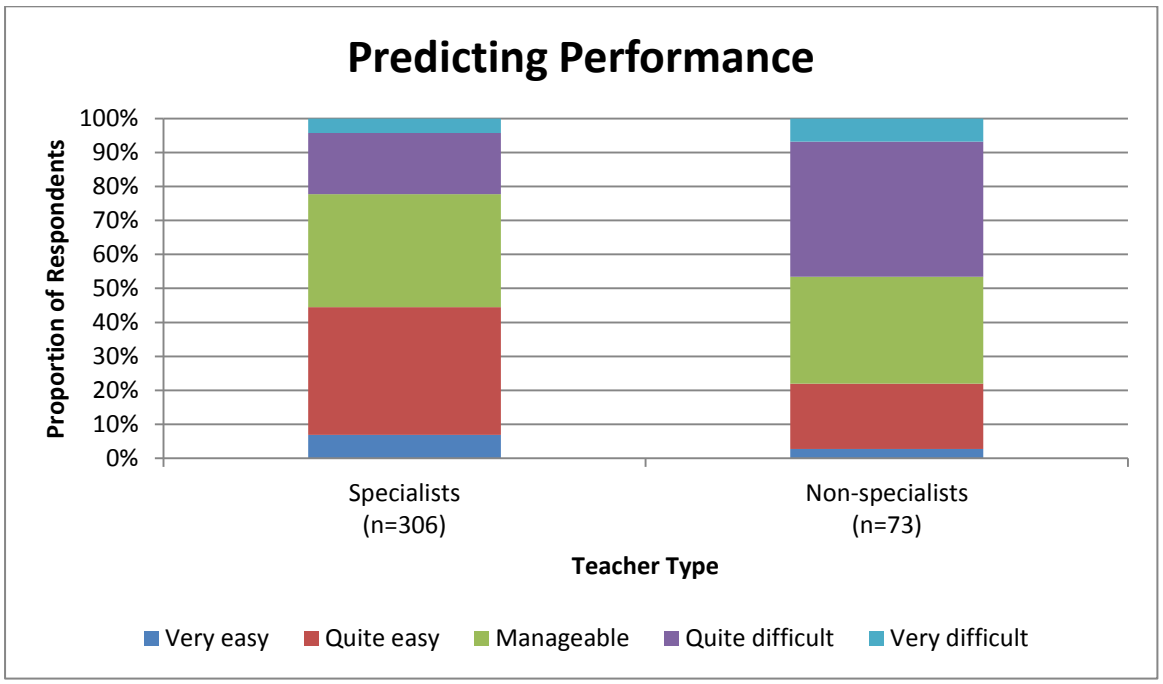

Figure 28 – Difficulty perceived by participants in predicting performance

Both specialists and non-specialists generally described giving students and parents feedback as either 'manageable' or 'quite easy' (see Figure 29). There weren't any significant differences between subjects (see Appendix 30).

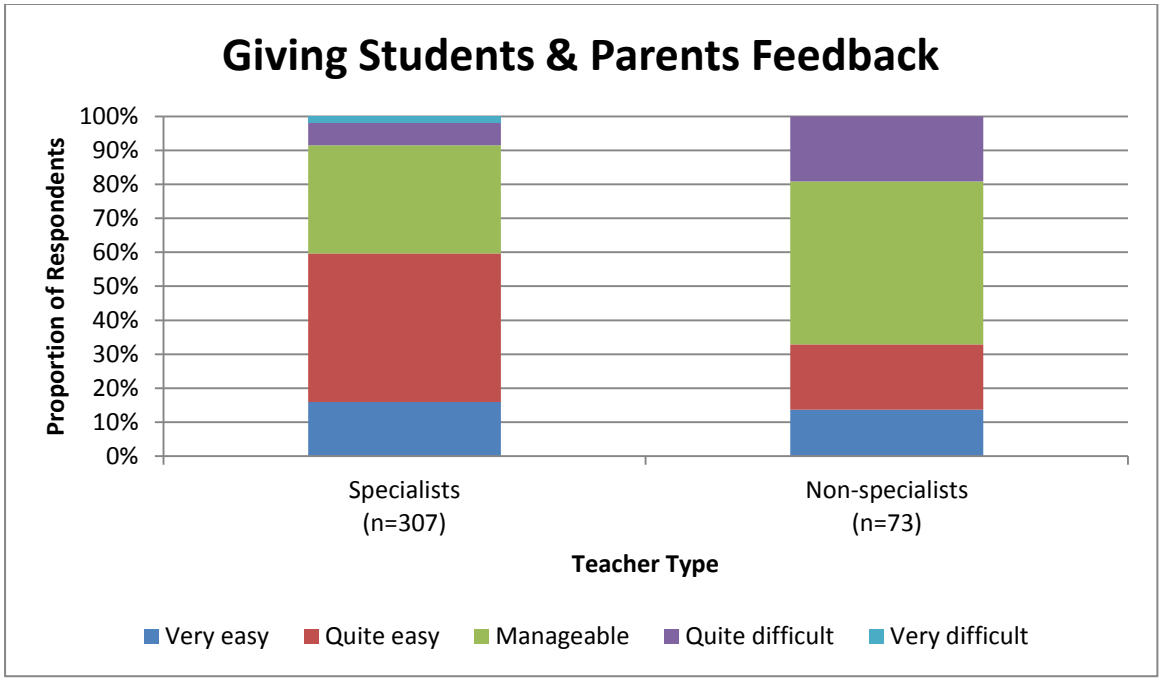

Figure 29 – Difficulty perceived by participants in giving students and parents feedback

3.3.1.2 Heads of department views

Heads of Department were also surveyed regarding these different aspects of teaching. They were asked to identify three from the list which they thought were the most challenging for non-specialist teachers in their department. The two most commonly reported areas were teaching subject-specific skills and teaching subject-specific content (see Table 7).

Table 7 – Which three areas are the most challenging for non-specialist teachers? (Frequency by subject of concern)

	Physics	Maths	Drama	CompSci	ICT	All
Teaching subject-specific skills	27	28	54	110	95	314
Teaching subject-specific content	51	33	46	96	72	298
Behaviour management	1	5	24	5	11	46
Setting practical work	21	2	9	17	17	66
Marking practical work	2	0	29	22	26	79
Setting classwork/homework	4	5	2	8	5	24
Marking classwork/homework	2	7	3	8	9	29
Setting controlled assessment tasks	4	2	2	19	12	39
Marking controlled assessment	5	1	6	34	38	84
Moderating assessment	4	7	12	17	24	64
Setting mock assessments	0	3	1	2	1	7
Marking past papers	3	6	2	1	4	16
Answering students' questions	31	16	4	33	31	115
Predicting performance	7	14	10	4	14	49
Giving students and parents feedback	1	2	3	0	6	12
None of these	0	1	0	0	5	6
Total	163	132	207	376	370	1248

There were differences between subjects, with 'marking controlled assessment' being a reasonably common choice regarding Computer Science and ICT non-specialists. 'Moderating assessment' was considered challenging for Drama and ICT/Computing non-specialists. This reflects the nature of assessment in those subjects compared to Physics and Maths. Similarly, 'answering students' questions' was viewed as less problematic for Drama non-specialists than non-specialists of other subjects.

3.3.2 Are there benefits to being a non-specialist teacher?

3.3.2.1 Non-specialists' views

When asked whether teaching their non-specialist subject had had any positive impacts on their teaching of their specialist subject, it was most common for respondents to say yes (see Appendix 31). Maths non-specialists were more likely to say no (see Figure 30).

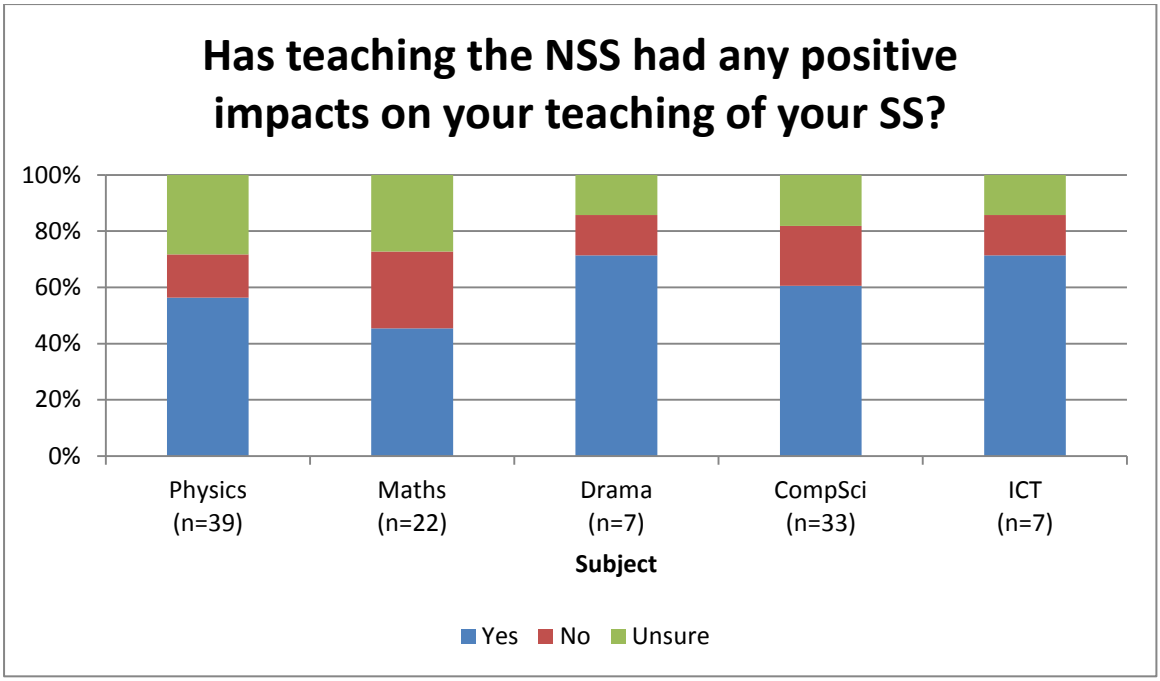

Figure 30 – Non-specialists' views regarding whether teaching their non-specialist subject had positive impacts on their teaching of their specialist subject

Those who responded 'yes' to this question were invited to explain their answer. Of the 53 participants who responded, more than half referred to a broadening of their knowledge or skills base as a consequence of teaching a non-specialist subject.

> *Encouraged me to develop my knowledge*
>
> *I am now more knowledgeable*

Approximately one-quarter referred to how teaching another subject had enabled them to develop a holistic approach to teaching, and to be able to link topics from different subject areas when teaching their students.

> *Better integration of drama and creative skills in all types of teaching*
>
> *Has allowed me to develop a 'teaching bridge' between science and maths*
>
> *I can use examples that cross over and support biology as I know what the girls are studying in physics*

The opportunity to better understand students' other experiences and understanding was also mentioned, as was how teaching a non-specialist subject had increased their confidence teaching their specialist subject.

Participants were then asked whether they enjoyed teaching their non-specialist subject. Appendix 32 and Figure 31 show that few participants said that they did not enjoy it (5.6%), with most saying yes (50.0%) or sometimes (42.9%). Physics non-specialists were the least likely to say they enjoyed teaching their non-specialist subject, with Maths non-specialists the most positive.

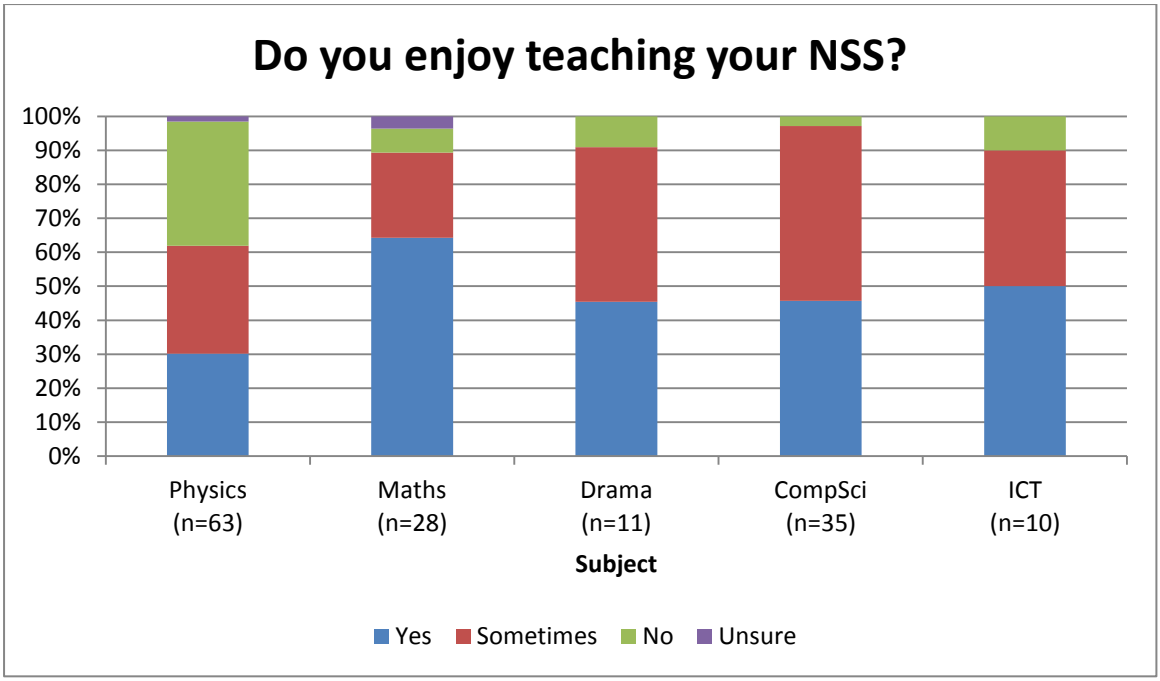

Figure 31 – Do non-specialists enjoy teaching their non-specialist subject?

Furthermore, 19.8% of participants reported that they actually preferred teaching their non-specialist subject over their specialist subject (see Appendix 33). This was also the case for 29.4% of respondents some of the time. Figure 32 shows that Physics non-specialists were less likely to report that they preferred teaching Physics to their specialist subject. Drama non-specialists were the most likely to report that they preferred teaching Drama to their specialism.

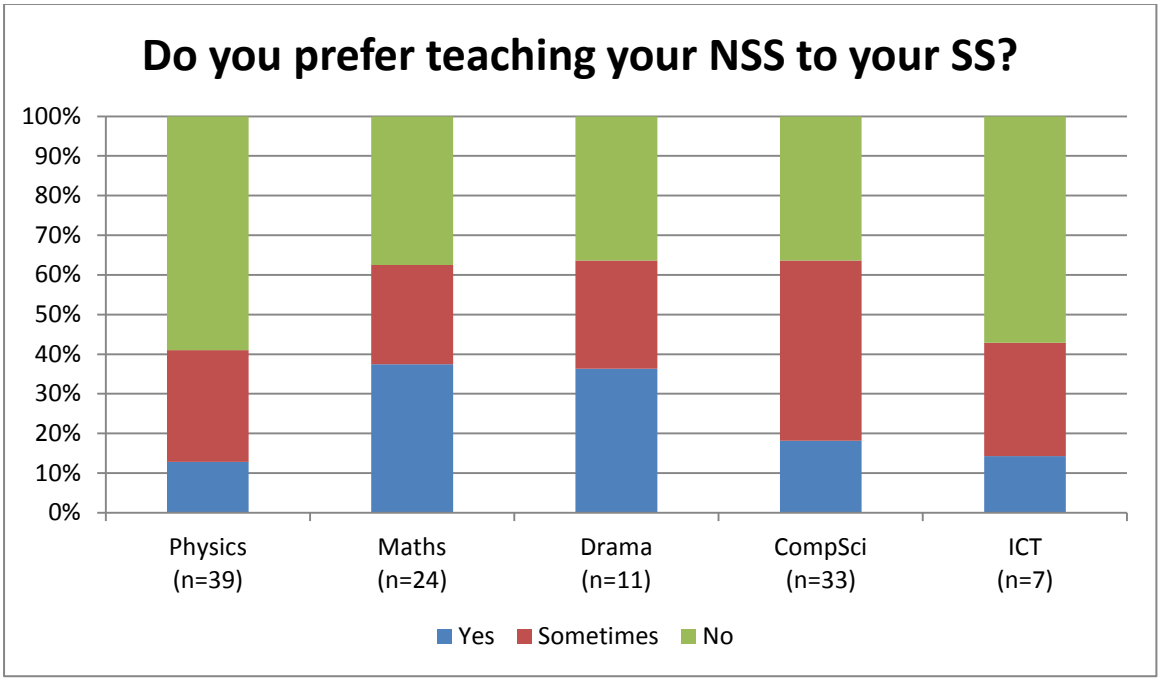

Figure 32 – Do you prefer teaching your non-specialist subject to your specialist subject?
Note: The option 'unsure' has been excluded from this figure, but may be found in Appendix 33.

Participants who said that they did prefer teaching their non-specialist subject to their specialist subject were invited to explain why. A total of 39 participants responded. It was

most common for respondents to comment that they can prefer teaching their non-specialist subject because they find the content more interesting.

> *It is much more active for the students and encourages them to be independent and take risks. The social skills it helps to develop are vital and the sense of achievement and reward is more immediate and celebrated. I am excited by the subject and can translate this to the students. It is also less bound than English by government requirements and testing.*

> *School level chemistry is dull, I think.*

It was also common for greater student engagement to be cited as a reason, and for a greater sense of satisfaction when students engage and understand concepts.

> *I have the pleasure of seeing a young person's face when they pass a functional skills maths exam.*

> *Value of light bulb moments.*

Others remarked that their non-specialist subject was a good challenge.

> *I always like a new challenge and finding out new ways to develop my pedagogy.*

> *A new subject always provides such opportunities.*

One or two respondents also reported that:

- classroom management was easier
- they got to teach different groups of students
- they felt more confident teaching it
- it is less time consuming to plan or mark
- it is easier to identify student misconceptions

3.3.2.2 Heads of department views

Whilst it is the case that non-specialist teachers 'exist' often because of shortages of specialist teachers in those subjects, it is possible for certain benefits to be derived from their lack of subject-specific expertise. When asked whether there were any benefits to having non-specialists, 56.8% of respondents said 'yes' (see Appendix 34), with all Computer Science/ICT heads of department saying yes (see Figure 33).

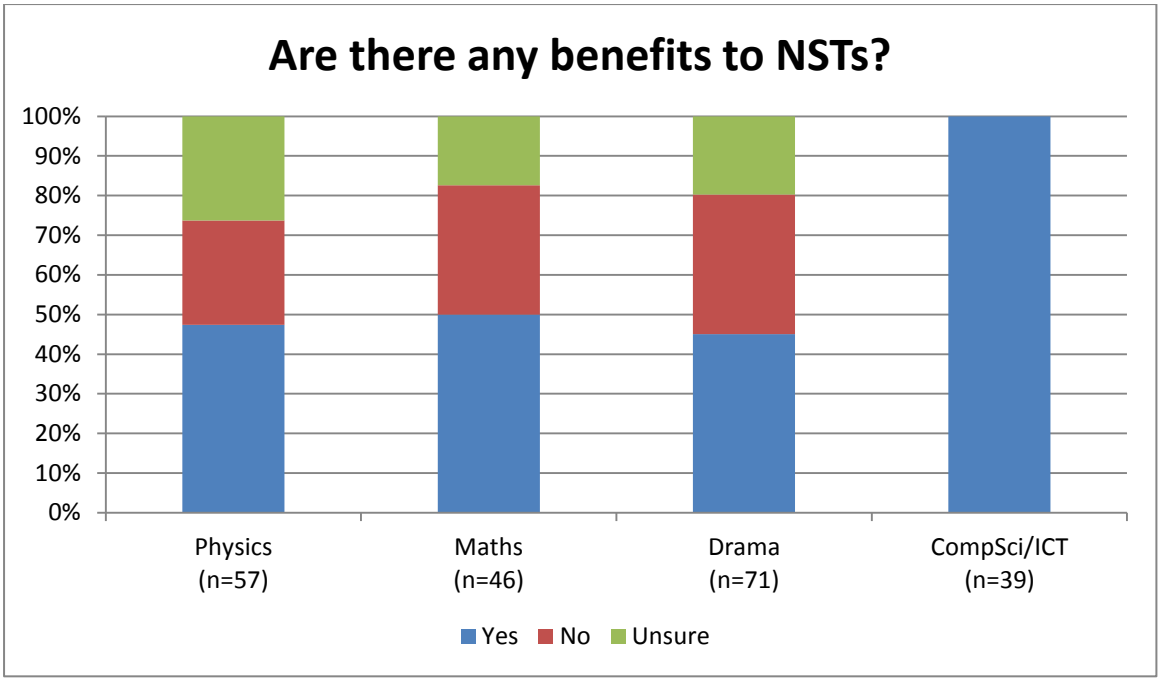

Figure 33 – Are there any benefits to having non-specialist teachers?

Participants who reported that there were benefits to having non-specialist teachers in their department were asked to embellish. The majority of the 115 who responded commented on how a teacher from another department can bring a 'fresh perspective' and link the topics in the subject to their specialist subject.

> *Non-specialists can bring a new 'take' on the subject that you may have overlooked previously.*
>
> *Teachers are able to use their expertise in other fields to enrich the activities that take place in Computer Science and ICT lessons.*
>
> *They can bring resources or ideas from their own subjects which can be applied to others (e.g. ways of marking, types of teaching).*
>
> *There can be cross-over between subjects*

Many also commented that, because non-specialists have to be conscientious to learn the subject knowledge themselves, they are better able to empathise with students when they struggle to understand concepts than someone who is a specialist:

> *Because they can struggle with the content/have to revisit it they sometimes appreciate the challenges students have and can explain it better as they don't make assumptions about what they consider 'easy'.*
>
> *They teach concepts in a much simpler/broken down way and relate to context more.*

Others commented on the practicalities of having non-specialist teachers, such as having a fully staffed department or being able to offer the subject to greater numbers of students. Asked what challenges are created for heads of department by non-specialists, 240 heads of department responded. The majority of responses concerned the burden of having to give non-specialists more support than specialists.

Checking standards across the department, moderation, having to support with behaviour management, picking up additional time with KS4 outside of lessons to complete work.

Much greater demand on creating and differentiating teaching materials. Greater time training and supporting. Additional meetings to fit round non-specialists' own department meetings. Greater time in moderation to ensure accuracy. Greater pressure due to lack of opportunities for delegation.

Supporting them without patronising them, and building their confidence.

Many participants explicitly referred to the time-consuming nature of this, and complained that it added to their workload.

Ensuring that the non-specialist teacher is comfortable with the lessons they are teaching and helping them to plan their lessons in addition to all the other HoD tasks.

Extra time spent monitoring them and 'picking up the pieces'.

I have to constantly check the progress of groups, provide resources, teach some topics myself to ensure progress. Run after school sessions for GCSE Computer Science. Create schemes of work, lesson plans and resources myself to ensure the correct content is covered. Share marking of non-specialist groups as well as all my own marking – the list is endless and I'm very tired.

Concerns were also raised that non-specialists generally weren't as effective teachers as specialists, and that they had to help non-specialists build their subject knowledge. Other factors described as challenging by the respondents included:

- providing CPD is expensive
- many non-specialists lack confidence
- non-specialists can be apathetic regarding their own teaching and development of their non-specialist subject
- students and parents are often uncomfortable knowing they are a non-specialist
- quality assurance and accountability are more challenging
- non-specialists struggle more with behaviour/classroom management

3.4 RQ3: What features would non-specialist teachers appreciate in OCR-supplied resources?

3.4.1 Heads of department views

Most heads of department reported that their non-specialist teachers required more support than their specialist teachers (see Appendix 35). One participant reported that non-specialist ICT teachers never require any more support than their specialist colleagues (see Figure 34).

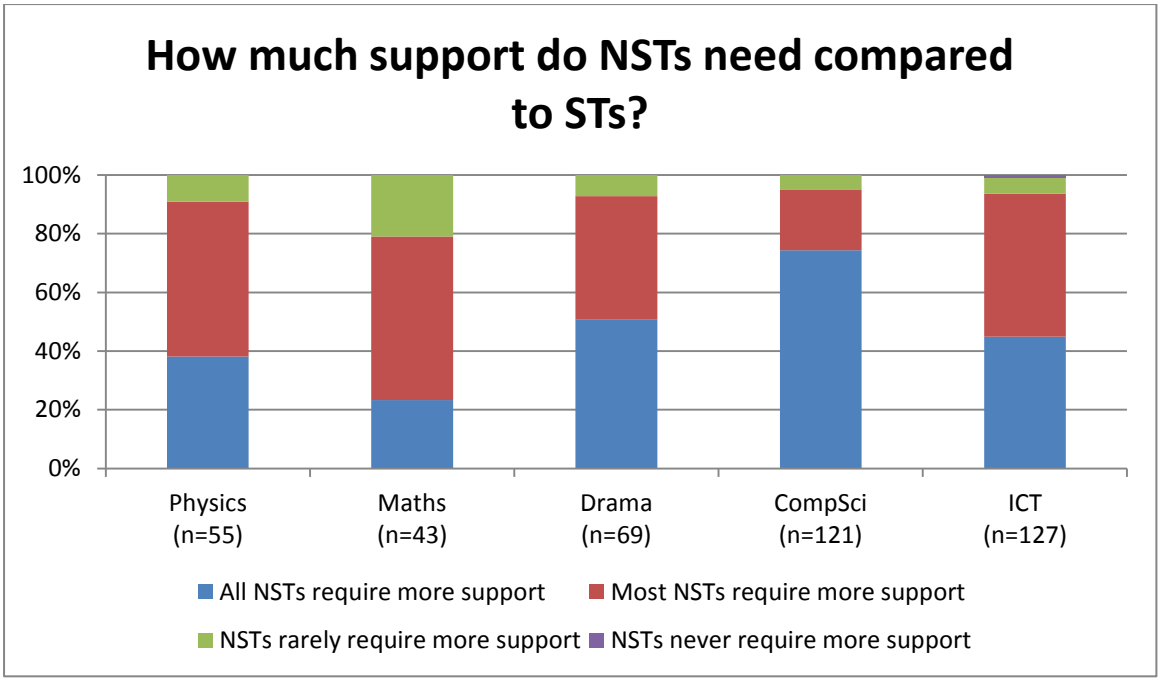

Figure 34 – How much support do heads of department perceive non-specialists need compared to specialists?

Presumably consequently, most respondents (78.7%) reported that having non-specialist teachers created additional challenges for them in their role as head of department. This was the case across all of Physics (75.4%), Maths (67.4%), Drama (81.7%) and Computer Science/ICT (82.3%) heads of department.

Heads of department were asked an open-ended question regarding what resources/support would be useful to them as a head of department for managing non-specialist teachers. There were a number of ideas that consistently arose across the heads of department in all of the subjects surveyed. The suggestion of detailed schemes of work and associated lesson plans and resources was raised frequently, with many participants raising the need for these to be accessible, more straight-forward or even tailored to non-specialist teachers.

As well as resources, the idea of the need for more training, both generally and targeting non-specialists was often raised; however this was frequently associated with comments regarding expense, with the emphasis that these needed to be cheap or free. A recurring idea was the need for more time to enable non-specialist teachers to be supported and some teachers indicated that they or other specialists in the department prepared the resources/lesson plans for, or in conjunction with, the non-specialists.

Resources specifically mentioned repeatedly for each of the subjects was the desire for more exemplars, of starters, lessons, practical ideas and assessments. The idea of increasing guidance being needed both in terms of both how to carry out lessons and in relation to the content and skills covered in the course, came up for each of the subjects. Heads of department for Drama and Physics, and on occasion computer science, which have a practical assessment component, also raised the issue of needing more guidance for these, such as step by step guidance, video tutorials, and examples of simple practicals that could be carried out.

3.4.1.1 Maths

The most common points raised by the Maths heads of department was the need for more time for non-specialist teachers to be supported by more experienced specialists in their

department and to assist with their planning. The need for training was also raised, in particular focusing on the needs of non-specialists, in terms of both course skills and content.

The idea of resources was also commonly raised, with some suggestions for readymade lesson plans and teaching materials, such as “examples of common misconceptions and activities to address them”. One resource commonly mentioned was exemplar papers and answers as well as marking and grade boundary guidance, at a time of uncertainty regarding the new GCSE grading system.

3.4.1.2 Drama

One of the most commonly mentioned points by heads of drama was the need for detailed schemes of work and lesson plans. Additionally, the need for these to be accessible or even aimed at non-specialists was also highlighted. Other resources that were mentioned frequently were filmed exemplars of practical work, perhaps with commentary. Similarly, the idea of templates for lessons and activities and ‘how to’ guides was frequently raised. A number also suggested that definitions of key terms in the subject would be useful.

Training was suggested, though many reported that more time would need to be made for this so that non-specialists could be helped in “developing their understanding and approach”. Training on how to manage students in a drama class setting was also raised, with some commenting on a need for non-specialists to learn things such as “where to position yourself in the classroom, how to promote cooperative working”.

3.4.1.3 Physics

A commonly referred to suggestion was the need for specific CPD regarding “key hooks, starters, plenaries etc.”. Training relevant to the practical elements of physics came up in particular, with one participant suggesting “Hands on training sessions that allow non-specialists to try out practical work”.

Another idea that came up frequently was the idea that physics teachers should be provided with guidance on teaching different topics, and “Greater detail given regarding how concepts could be taught particularly suitable practicals”. Additionally, means of preparing non-specialists for difficult questions and misconceptions that commonly arise in physics were also mentioned by a number of participants. Suggestions were made for readymade ‘off-the-peg resources’ including suggestions for lesson plans and resources such as PowerPoints “of all the key ideas, with very detailed sequences for non-specialists to use with students”.

A number of participants also emphasised the need more specialist physics teachers in the first place and for more time to enable non-specialists to develop “links with good specialists” in order to be supported. This idea of time was again raised, linking this to the need to provide non-specialists with training and guidance. One participant remarked that the most useful resource for them would be “Time with colleagues to explain physics pedagogy, to familiarise them with experiments and to discuss student misconception”.

3.4.1.4 ICT

The need for training was raised by many of the heads of ICT, including “Targetted CPD courses- getting familiar with the new spec, controlled assessment requirements”, and the need for these training courses to teach practical skills was also highlighted. The benefits of guidance to enable ICT teachers to teach effectively was raised with suggestions that simple clear content guides were needed, including “step by step guides for how to complete projects, including good video tutorials”.

The idea of resources which could be used to make pre-prepared lessons was frequently raised. The need for more assessment-specific resources was raised “marked and moderated sample coursework & exam style question”.

3.4.1.5 Computer Science

The need for more training courses specifically for non-specialists came up frequently from the heads of computer science. The need for non-specialists to be taught both computer science subject skills such as programming as well as the course content was repeatedly raised as part of this, as well as the need for increased guidance for non-specialist computer science teachers in terms of the course content and its application. For example, one participant said that a “teacher guide to the specialist content with explanation of what is expected and what you are looking for pupils to achieve” would be useful.

Teaching resources to assist with planning and carrying out lessons was also frequently suggested: “Off the shelf schemes of work and lesson plans with associated resources. Interactive resources to use in lessons”.

Assessment-related resources such as exemplar marked and moderated coursework and exam style questions were also requested by participants.

Some participants also suggested that course requirements were too difficult for non-specialists, even going as far as remarking that certain things should be removed from the specification as a consequence: “simpler programming elements and hardware requirements on the syllabus - it is ridiculous for non-specialists (and some parts for specialists)”.

3.4.2 Teachers’ views

3.4.2.1 What support do teachers already receive?

Participants were given a list of 8 different areas in which they might have been given support in the teaching of their non-specialist subject. They were asked to indicate which of those areas they had been supported in.

Appendix 36 and Figure 35 show the frequency with which certain options were selected. For specialists, the area in which they were most commonly supported was with subject-specific CPD (132 participants). For non-specialists, the most common area of support was with general subject knowledge (55 participants), though subject-specific CPD was the second most common (39 participants).

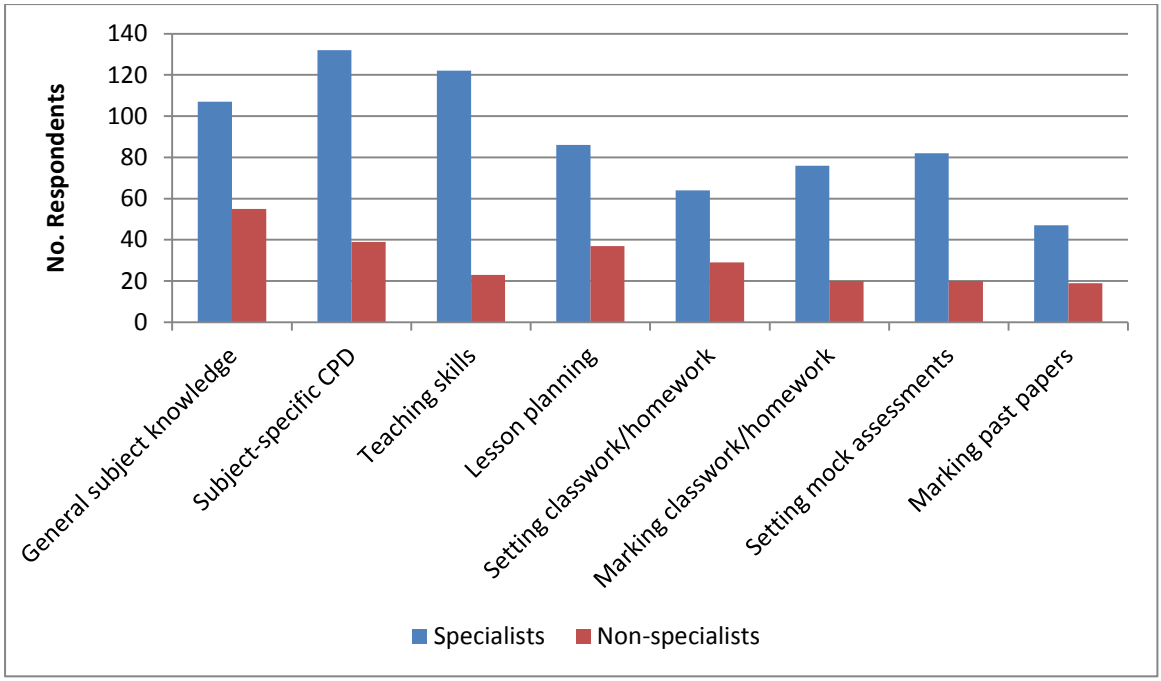

Figure 35 – What support have teachers received from their HOD/school?

Drama non-specialists were most commonly supported in their setting of classwork/homework (7 participants) than the other options, though the number of non-specialist Drama teachers taking part in this question was quite small (*n*=37). ICT non-specialists were most commonly supported in lesson planning (5 participants) whereas for specialists, it was general subject knowledge which was most common (7 participants).

Participants were also asked an open-ended question regarding whether they had received or sought out other support in their teaching of their subject that were not mentioned in the multiple choice question. Across all of the subjects both specialists and non-specialists reported using resources from online sources as a common method of support to help them to teach their subject. These included both general teaching websites such as the TES and subject specific websites. Both reported using peer support, however non-specialists were more likely to do so through face to face interactions such as talking to colleagues, whilst ST made use of online forums and Facebook groups to a greater extent. Neither reported attending training or courses particularly often however non-specialists reported having used online training/courses, many of which were free MOOCs, to a greater extent that specialists. Finally, specialists were more likely to mention having accessed support through independent organisations specific to their subject than non-specialists.

Maths

Both specialist and non-specialist maths teachers frequently reported that they used general online resources, either through the internet more generally, using search engines and sites such as Google and Twitter or through general teaching websites such as the TES. The use of Twitter was mentioned particularly frequently by maths teachers, especially specialists, compared to teachers of other subjects. They also commonly reported using maths specific websites such as Teach It Maths, My Maths, Maths Watch, TES and Mr Barton Maths.

Whilst specialists frequently reported making use of organisations such as FMSP, STEM, CIMT, NCETM, these were not reported by non-specialists, with only a reference to an MEI conference by a single participant.

Physics

The most common methods of support that both specialist and non-specialist physics teachers reported having used was resources from general online sources such as internet search and teaching websites such as the TES and Kerboodle. Both also reported gathering resources from physics specific websites such as Talk Physics and Capital Physics; however, a larger proportion of specialists did so. Physics specialists more commonly reported accessing support from peers online such as through forums and Facebook groups, whilst non-specialists primarily reported receiving support from peers offline, such as from colleagues or technicians at school.

Whilst both specialists and non-specialists reported accessing support through external organisations such as the Institute of Physics and STEM, specialists reported this to a greater extent. Both specialist and non-specialists reported using physical resources such as textbooks quite frequently compared to participants who taught other subjects.

Drama

Only a small number of drama non-specialists answered this question and their answers were quite variable. All drama teachers commonly reported having accessed resources online. Whilst specialists commonly reported having accessed resources online through sites such as the TES, they rarely specified drama specific websites. The use of online forums was mentioned, in particular Facebook forums for drama teachers and educators. Facebook was mentioned extremely frequently by drama teachers compared to other teachers and was often the only form of support mentioned by an individual drama teacher.

Training and courses, both online and offline were only mentioned on a couple of occasions by specialists and not at all by non-specialists. Drama teachers did not frequently report accessing support through independent drama organisations with non-specialists not having done so at all.

Computer Science

Computer Science teachers commonly reported having used online resources, with non-specialists using subject specific websites such as Code Academy, Khan Academy, BBC Bitesize and Teach ICT more than general teaching websites such as TES. Computer Science teachers were also highly likely to have accessed support from peers online through online forums such as Facebook groups and CAS, though specialists reported this somewhat more frequently.

Approximately a quarter of non-specialists reported having accessed training online, and specialists also reported this to a greater extent than all other subject teachers except ICT teachers. Neither specialist nor non-specialist Computer Science teachers specifically reported having received any face to face training. Both specialists and non-specialists reported using support from external organisations, in particular CAS. This was in the form of in-person meet ups, online forums, trainings and resources. Specialists were more likely to have done so, although both did so to a greater extent than other subject teachers.

ICT

Both specialist and non-specialist ICT teachers most commonly reported accessing support online through forums. Both also reported having in-person peer support through meet-ups, and teacher networks, including Facebook pages and online forums. They commonly reported having accessed resources online such as through the TES or using a search engine. However whilst specialists reported using online resources from ICT specific websites such as Teach ICT and Yacapaca, no non-specialists reported doing this.

A few ICT teachers reported taking training courses, but none specifically reported any face-to face training. Support from other organisations was not frequently reported by ICT teachers, with CAS and the National STEM Centre only mentioned on a small number of occasions.

3.4.2.2 What support would teachers like to receive?

Suggestions for resources came up, both in terms of resources for planning lessons and in carrying them out. Participants often focused on the need for such resources to be easily accessible and free/cheap, and the idea that these needed to be designed specifically for/bearing in mind non-specialists who might be teaching the course frequently arose from the non-specialists. Resources that were suggested included lesson plans and in depth schemes of work. Additionally, participants frequently suggested the need for more exemplar materials, exams, and in the case of subjects with a practical element (e.g. physics, drama) for those practicals as well. Participants emphasised the need for exemplars which provided clear guidance on the mark scheme, grade boundaries, and model worked answers at different levels.

Maths

Both Maths specialists and non-specialists stated that they would like more resources. The need for resources to be easily accessible both in terms of using them, and locating them was mentioned, with one participant commenting that *"*Many official websites [tend to be] too complicated and time consuming to find resources so I don't use them as I don't have the time".

A specific resource both specialists and non-specialists frequently suggested was question banks and exam papers in the new exam-style for both practice, and to act as exemplars. Specialist maths teachers in particular also frequently mentioned how they would like more information and guidance about grade distributions and marking in the new specification, relating this to the need for worked examples: "we need more exam style questions and some idea on what the exam boards are looking for when awarding top marks".

Computer Science

Non-specialists frequently requested resources and ideas for lessons, especially those which "helps you to feel more confident". This desire for more training and resources offering guidance was frequently raised, particularly in terms of the more technical and practical aspects, e.g. programming and controlled assessment resources.

Both specialists and non-specialists requested more exemplars and guidance in terms of controlled assessment and coursework, reporting that they wanted more mock assessments and clearer and more concise guidelines for coursework.

ICT

There were only a small number of responses from ICT non-specialists; they referred to a wide range of things including the need for courses, lesson resources, plans and schemes of work, and guidance and specialist training. Specialists primarily requested more resources, in particular exemplars of controlled assessment. They also frequently mentioned the desire for more comprehensive guidance, particularly in terms of assessments.

Drama

Only a small number of Dramas non-specialists answered this question. Again the idea of "*courses for non-specialists"* was stated but generally resources – in particular exemplars of

past papers and practical work – were most commonly requested. The Drama specialists frequently referred to the desire for more resources, such as schemes of work, lesson plans and, in particular, exemplar materials were requested both for practical and written work.

The idea of exemplar materials of both written and practicals (e.g. on DVDs) was also frequently raised. The need for clear and specific guidelines for marking assessments was raised, with some criticism that the current assessment criteria were not clear enough: e.g. “less fluffy assessment criteria”. The desire for more training was also raised on a number of occasions. Finally, a number of participants mentioned the desire for active support such as via helpline or email support, chat forums and offers of school visits.

Physics

Physics non-specialists most commonly raised the issue of resources, both for planning lessons and carrying them out, raising issues such as wanting more in-depth information and guidance on concepts and definitions. The issue of needing such resources to be tailored towards non-specialists was raised, with one participant commenting that current resources “take a lot of physics experience for granted”. Physics specialists also requested resources for teaching, both practical and content suggesting that there weren’t sufficient resources for teaching the new GCSE physics specification, with participants commenting that there “seems to be plenty for biology, less for chemistry and next to nothing for physics”. A number of specialists and non-specialists highlighted how more free resources were needed, raising issues of budget concerns.

Both specialists and non-specialists mentioned wanting more exemplar materials (including exemplar answers), both for exam papers and practicals, as well as guidance on grade boundaries and marking.

3.5 Subject-by-subject summary

Table 8 summarises the results from any questions where there were notable differences between the subjects. For multiple choice questions, the most common response is stated along with the proportion of participants who chose that option. As indicated by the contents of the table, there were few notable differences in the responses given by participants of different subjects to the open-ended questions.

Specifically, there is little to note regarding differences between subjects relating to features which would be beneficial in resources targeting NSTs. The only differences might lie in Drama and Physics, where there were suggestions for exemplar practicals – something which would not feature in Maths, Computer Science or ICT due to the nature of those subjects and their assessment.

Table 8 – Summary by subject

Research Question	Survey Question	Respondent	Physics	Maths	Drama	Computer Science	ICT
Why are there NSTs?	Any difficulty recruiting STs in the last 2 years?	HOD	Yes (73.4%)	Yes (86.8%)	No (57.1%)	Yes (88.2%)	
	Forced to use agency staff in the last 2 years?	HOD	No (63.8%)	Yes (57.4%)	No (62.5%)	Yes (52.8%)	
	Recruitment compared to 2 years ago?	HOD	About the same (35.3%)	Much more difficult (43.5%)	About the same (33.3%)	Much more difficult (68.0%)	Much more difficult (34.1%)
What qualifications do NSTs have?	Most common TQ	NST	Chemistry	ICT	English, Music, Science	Maths	PE
	Most common degree	NST	Biological Sciences	Biological Sciences, Drama	English	ICT	Biological Sciences, Drama
	Top 2 other subjects taught	NST	Biology, Chemistry	Science, English	English, Dance	ICT, Business	Computer Science, Business, Chemistry
Are there benefits to being an NST?	Do NSTs need more support?	HOD	Most (52.7%)	Most (55.8%)	All (50.7%)	All (74.4%)	Most (48.8%)
	Do they enjoy teaching their NSS?	NST	No (36.5%)	Yes (64.3%)	Yes & Sometimes (45.5% each)	Sometimes (51.4%)	Yes (50.0%)
	Do they prefer teaching their NSS?	NST	No (59.0%)	Yes & No (37.5% each)	Yes & No (36.4% each)	Sometimes (45.5%)	No (57.1%)

4. Discussion

The responses to this questionnaire have helped to build a picture of the background characteristics of non-specialist teachers (how they came to be a non-specialist teacher, what their specialisms are, what age groups they teach), as well as the problems they encounter, and what features of resources and training would be helpful for them and their heads of department. Whilst much research in this area – and particularly that which has been reported in the media in recent years – is very negative, some positive responses were given by some non-specialists and heads of department regarding the benefits of teaching non-specialist subjects. The results also highlight that non-specialists do not necessarily teach students who are preparing for high-stakes examinations, and that it is more likely that they will teach students at Key Stage 3.

RQ1: Who are non-specialist teachers? What are their background characteristics?

It was generally believed by both non-specialists themselves and heads of department that the main reason a teacher might be considered non-specialist is because they do not have a degree in that subject. Not having a teaching qualification in the subject was the second-most cited reason. Indeed, whilst most specialist participants reported that they had a teaching qualification in their specialist subject, most non-specialists had teaching qualifications and degrees in other subjects. The subject specialisms of non-specialist participants included:

- **Maths**: The Sciences and ICT were common teaching qualification specialisms, though teachers of such contrasting subjects as Drama and Art also reported teaching Maths. Many non-specialists had degrees in the Sciences, but significant minorities had degrees in the Arts, Humanities and Social Sciences.
- **Computer Science**: Non-specialist participants were generally specialists of mathematically-demanding subjects (e.g. Maths, Physics) or those often requiring the use of computers (e.g. ICT, Business, Design Technology). It was most common for non-specialists to have degrees in ICT or Business, with others having degrees in areas such as Drama, Languages or Geography.
- **ICT**: A wide range of specialist subjects were taught by non-specialists, including PE, Business, English, Maths and Science. Similarly, their degrees were in a variety of subjects, from the Biological Sciences to Drama to Design Technology to English.
- **Drama**: English and Music, in particular, were common specialisms of non-specialist Drama teachers. It was most common for them to have degrees in English, though some had degrees in a diverse range of fields including Religious Studies and Chemical Engineering.
- **Physics**: Chemistry was a popular specialism of Physics non-specialists, as were Biology and Maths. Non-specialists tended to have degrees in the Biological Sciences, Chemistry and Maths.

As one might expect, it was most common for non-specialists to report that they became a non-specialist teacher because of a shortage of specialist teachers in their school. This was reinforced by the responses of heads of department regarding the challenges of recruiting specialist teachers.

Most Maths, Physics and Computer Science/ICT heads of department reported that they had found it difficult to recruit specialist teachers in the last two years. This was particularly the case for Computer Science, where it was generally reported by heads of department to be much more difficult to recruit specialists than in the recent past. Physics, Maths and ICT teachers were also reported to be more difficult to recruit than two years ago. As well as

recruiting non-specialists, most Maths and Computer Science/ICT heads of department reported that they had to use agency staff to cover vacancies in the last two years.

It was most common for non-specialists to teach Key Stage 3 (89.1% of respondents), and often GCSE (87.1%), though they rarely (13.0%) taught A-levels in their non-specialist subject. About 30% of non-specialists reported that they spent all of their teaching time on their non-specialist subject, with a similar proportion reporting that they only taught their non-specialist subject some of the time. This is in contrast to specialists who, unsurprisingly, mostly reported that they taught their specialist subject all the time.

Nonetheless, when asked whether they taught any other subjects, most specialists reported that they taught at least one additional subject. The other subjects taught come as no surprise given the specialisms of non-specialist participants. The most common additional subjects taught by specialists were:

- Physics specialists: Biology and Chemistry
- Maths specialists: Sciences
- Drama specialists: English, Dance and Music
- Computer Science specialists: ICT and Business
- ICT specialists: Computer Science

The findings regarding the background characteristics of non-specialist teachers are consistent with the findings of the literature review, though the number of participants by subject were reasonably low in some instances, and a larger sample may have yielded more generalizable results.

RQ2: What problems do non-specialist teachers tend to encounter?

Generally it appeared that heads of department and non-specialists themselves were broadly in agreement regarding the aspects of teaching the non-specialist subject which were most challenging.

Much greater proportions of non-specialists than specialists reported that answering students' questions, predicting performance, moderating assessment and setting controlled assessment tasks were quite or very difficult. Conversely, much greater proportions of specialists than non-specialists reported that teaching subject-specific skills and content, setting mock assessments and giving students and parents feedback were quiet or very easy (differences tended to lie in the proportion reporting that these were 'manageable'). Indeed, heads of department reported that teaching subject-specific skills and content were the two most challenging areas for non-specialists. Little difference was found between specialists and non-specialists in terms of how challenging behaviour management, setting/marking practical work, setting/marking classwork/homework, marking controlled assessment and marking past papers were. This suggests areas which might be beneficial to include in support resources for non-specialist teachers.

However, there were some 'silver linings' in participants' responses, as the survey sought to establish whether there were any positives – for the teachers themselves or their departments/students – to having non-specialists. Most non-specialists reported that teaching their non-specialist subject had a positive impact on their teaching of their specialist subject. Additionally, it was most common for heads of department to report that there were benefits to having non-specialist teachers. Their explanations reflected the responses of the non-specialists in that they claimed that non-specialists often brought a fresh perspective to teaching, and were able to make cross-curricular links. Finally, many non-specialists said that they enjoyed teaching their non-specialist subject – and 19.8% reported that they actually preferred teaching it to their specialist subject. This was most common for Drama and Maths non-specialists, and least common for Physics non-specialists. Indeed, it was most common for Physics non-specialists to report that they did not enjoy teaching their non-specialist

subject. Most Maths and ICT non-specialists said that they enjoyed teaching their non-specialist subject, and Drama and Computer Science non-specialists most commonly said that they sometimes enjoyed teaching it.

Therefore, it shouldn't be forgotten that there can be positives to having non-specialist teachers. It is possible that the positives could be embraced and support given to non-specialists in order to make the most of their specialisms when teaching an unfamiliar subject.

RQ3: What features would non-specialist teachers appreciate in OCR-supplied resources?

Those running departments with non-specialist teachers reported spending a lot of their time on supporting non-specialists, significantly adding to their workload. In particular, they often mentioned the burden of writing very detailed lesson plans and schemes of work, and spending more time on marking.

This was reflected in their responses to a question regarding what features they would appreciate in OCR-supplied resources targeting non-specialist teachers. Many reported that detailed schemes of work and lesson plans which were made specifically to be accessible for non-specialists would be very helpful. Many referred to the financial burden of having non-specialist teachers in terms of resources and training, and therefore said that such resources would need to be very cheap or free for them to be able to get the most benefit. Specific features many referred to also included sample starts, practical ideas and assessments. These sentiments were reflected by the non-specialists themselves, and also included specifics such as mark scheme guidance, information on grade boundaries and model answers.

Non-specialist teachers most often reported already receiving support with their general subject knowledge and lesson planning. However, many reported that they received no support whatsoever. Most had sought out support for themselves online, with non-specialists more likely to have done this than specialists, though specialist teachers were more likely to have sought support from subject-specific independent organisations than non-specialist teachers. This suggests that such organisations could do more to promote what they offer to non-specialists, or OCR could perhaps compile lists of such sites and organisations so that non-specialists know where to seek effective support independently.

Whilst the responses of the participants were common across subject areas, OCR specialists in each subject might benefit from closely reading the subject-by-subject responses in the results section. The current sources of online support and training courses accessed by participants might also be of interest.

5. Recommendations

It is difficult to make broad-brush recommendations using the data collected in this survey. Whilst a lot of data were collected regarding what constitutes a non-specialist teacher, data regarding what they struggle with and what resource features would be useful are less concrete. That is, the findings from questions regarding what aspects of teaching non-specialists in particular struggle with show that it is mainly subject-specific content and skills which are challenging. When asked what features would be useful in OCR resources for non-specialists, generally several things were suggested which covered nearly all aspects of possible resource provision, with no clear distinctions between subjects. It appears to be very much the case that 'more is more' when it comes to resources, particularly those for non-specialists.

Resources targeting non-specialists certainly appear to be something which schools and teachers would appreciate, due to time and budget constraints, so any resources that OCR

would wish to produce and have used would have to be very cheap or free, and easily accessible.

OCR subject specialists and those writing resources would be welcome to read the full set of open-ended responses to questions regarding which features would be useful to non-specialist teachers in OCR-supplied resources. Whilst their responses have been summarised succinctly in this report, they might appreciate reading word-for-word the responses.

6. Conclusion

This summer the British media described a 'crisis' of sorts in secondary education, wherein the number of teachers teaching subjects outside their specialisms had grown to a point of concern. Existing research on this topic has concentrated on producing figures – the proportions of teachers who teach subjects outside of their specialism, and the proportion of schools which have non-specialist teachers. However, this report has concentrated on the factors which lead to the existence of non-specialist teachers, these teachers' backgrounds, and their experiences teaching their non-specialist subjects. It is not the case that a non-specialist teacher is a poor teacher, ill-equipped to teach effectively. Indeed, the survey found some silver linings regarding non-specialist teaching, finding that good proportions of non-specialists enjoyed teaching their non-specialist subjects, and heads of department thought that there were many benefits in having non-specialists in their department. However, what became very clear from participants' responses to open-ended questions was that teachers' time is so precious that the additional burden of a non-specialist teacher can create too much extra work for heads of department, and the pressure associated with teaching a subject outside one's specialism can be very stressful and time-consuming for a non-specialist teacher. Therefore, this certainly appears to be an area which OCR can focus on to produce resources which would be welcomed by both teachers and heads of department.

7. References

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Appendices

Appendix 1
Dear

Cambridge Assessment is a not-for-profit non-teaching department of the University of Cambridge, and the parent organisation of OCR, Cambridge International and Cambridge English. We are currently undertaking a study into the support needs of Key Stage 3 and 4 teachers of physics, drama, maths and computing/ICT in the UK.

We are interested in hearing from both specialist and non-specialist teachers, and heads of department.

Participants in an online questionnaire may be entered into a prize draw for their choice of a £100 Amazon voucher or book token.

The questionnaire will take no more than 10 minutes to complete and all responses are anonymous.

If you have any questions about the research please contact Ellie Darlington:
darlington.e@cambridgeassessment.org.uk

Appendix 2
Where participants heard about the questionnaire: Frequency of response and % within subject of concern

Source	Maths	Computer Science/ ICT	Physics	Drama	Total
Association of Science Education	1 0.4%	0 0.0%	4 2.5%	0 0.0%	5 0.5%
Association of Teachers of Mathematics	7 2.8%	0 0.0%	0 0.0%	2 0.8%	9 1.0%
Cambridge Assessment email	35 14.0%	41 13.8%	34 21.2%	16 6.7%	126 13.3%
Cambridge Assessment Facebook	0 0.0%	6 2.0%	0 0.0%	13 5.5%	19 2.0
Cambridge Assessment Twitter	3 1.2%	2 0.7%	1 0.6%	0 0.0%	6 0.6%
Computing at School (British Computing Society)	0 0.0%	9 3.0%	0 0.0%	0 0.0%	9 1.0%
'Drama Matters' Facebook group	0 0.0%	0 0.0%	0 0.0%	2 0.8%	2 0.2%
FMSP	24 9.6%	0 0.0%	0 0.0%	0 0.0%	24 2.5%
Friend/colleague	35 14.0%	20 6.7%	35 21.9%	25 10.5%	115 12.2%
London Drama	1 0.4%	0 0.0%	0 0.0%	2 0.8%	3 0.3%
MEI associates email	3 1.2%	0 0.0%	0 0.0%	0 0.0%	3 0.3%
NCETM	38 15.2%	0 0.0%	1 0.6%	0 0.0%	39 4.1%
OCR email	58 23.2%	118 39.6%	41 25.6%	22 9.2%	239 25.3%
OCR Facebook	2 0.8%	82 27.5%	0 0.0%	138 58.0%	222 23.5%
OCR Twitter	20 8.0%	3 1.0%	7 4.4%	5 2.1%	35 3.7%
Other email	1 0.4%	3 1.0%	3 1.9%	3 1.3%	10 1.1%
Other Facebook	0 0.0%	0 0.0%	0 0.0%	3 1.3%	3 0.3%
Physics Teaching News & Comment (PTNC)	1 0.4%	0 0.0%	11 6.9%	0 0.0%	12 1.3%
Royal Society of Chemistry	0 0.0%	0 0.0%	2 1.2%	0 0.0%	2 0.2%
TES forum	21 8.4%	14 4.7%	18 11.2%	7 2.9%	60 6.3%
TalkPhysics	0 0.0%	0 0.0%	3 1.9%	0 0.0%	3 0.3%
Total	250	298	160	238	946

Appendix 3

The types of school that participants worked at: frequency of response and % within subject of concern

	Maths			CompSci			ICT			Drama			Physics			Total		
	ST	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**
State comp.	109 68.6%	24 61.5%	133 67.2%	54 90.0%	32 84.2%	86 87.8%	13 65.0%	9 69.2%	22 51.2%	66 77.6%	11 52.4%	77 72.6%	30 61.2%	35 74.5%	65 67.7%	272 72.9%	111 703%	383 72.1%
State selective or grammar	10 6.3%	0 0.0%	10 5.1%	1 1.7%	2 5.3%	3 3.1%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	3 14.3%	3 2.8%	4 8.2%	3 6.4%	7 7.3%	15 4.0%	8 5.1%	23 4.3%
Independent	24 15.1%	3 7.7%	27 13.6%	2 3.3%	4 10.5%	6 6.1%	2 10.0%	0 0.0%	2 4.7%	13 15.3%	2 9.5%	15 14.2%	10 20.4%	4 8.5%	14 14.6%	51 13.7%	13 8.2%	64 12.1%
Sixth form college	3 1.9%	0 0.0%	3 1.5%	1 1.7%	0 0.0%	1 1.0%	1 5.0%	1 7.7%	2 4.7%	1 1.2%	1 4.8%	2 1.9%	2 4.1%	0 0.0%	2 2.1%	8 2.1%	2 1.3%	10 1.9%
Other FE college	4 2.5%	4 10.3%	8 4.0%	1 1.7%	0 0.0%	1 1.0%	3 15.0%	1 7.7%	4 9.3%	2 2.4%	1 4.8%	3 2.8%	2 4.1%	2 4.3%	4 4.2%	12 3.2%	8 5.1%	20 3.8%
Unsure	0 0.0%	1 2.6%	1 0.5%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 1.2%	1 4.8%	2 1.9%	0 0.0%	0 0.0%	0 0.0%	1 0.3%	2 1.3%	3 0.6%
Other	9 5.7%	7 17.9%	16 8.1%	1 1.7%	0 0.0%	1 1.0%	1 5.0%	2 15.4%	3 7.0%	2 2.4%	2 9.5%	4 3.8%	1 2.0%	3 6.4%	4 4.2%	14 3.8%	14 8.9%	28 5.3%
Total	159	39	198	60	38	98	20	13	33	85	21	106	49	47	96	373	158	531

Appendix 4

The regions of the schools that participants taught in: frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci		ICT		CS/ ICT	Total			
	ST	NST	HOD	ST	NST	HOD	ST	NST	HOD	ST	NST	ST	NST	HOD	ST	NST	HOD	All
East of England	6 12.2%	7 15.9%	13 16.2%	28 17.8%	7 19.4%	11 11.5%	14 16.5%	6 28.6%	17 10.4%	4 6.7%	5 13.5%	3 14.3%	3 23.1%	16 7.7%	55 14.8%	28 17.5%	57 10.4%	140 13.0%
East Midlands	4 8.2%	2 4.5%	9 11.2%	17 10.8%	4 11.1%	11 11.5%	2 2.4%	0 0.0%	21 12.8%	11 18.3%	1 2.7%	5 22.8%	1 7.7%	16 7.7%	39 10.5%	8 5.0%	57 10.4%	104 9.6%
London	7 14.3%	9 20.5%	11 13.8%	22 14.0%	3 8.3%	14 14.6%	8 9.4%	2 9.5%	17 10.4%	4 6.7%	2 5.4%	0 0.0%	1 7.7%	17 8.2%	41 11.0%	17 10.6%	59 10.8%	117 10.8%
North East	1 2.0%	3 6.8%	2 2.5%	7 4.5%	1 2.8%	4 4.2%	5 5.9%	9 20.5%	7 4.3%	3 5.0%	0 0.0%	0 0.0%	2 15.4%	6 2.9%	16 4.3%	15 9.4%	19 3.5%	50 4.6%
North West	5 10.2%	5 11.4%	4 5.0%	9 5.7%	3 8.3%	7 7.3%	7 8.2%	3 6.8%	21 12.8%	12 20.0%	6 16.2%	2 9.5%	1 7.7%	30 14.5%	35 9.4%	18 11.3%	62 11.3%	115 10.7%
Northern Ireland	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 1.2%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 4.8%	0 0.0%	1 0.5%	2 0.5%	0 0.0%	1 0.2%	3 0.3%
Republic of Ireland	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 1.2%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 0.3%	0 0.0%	0 0.0%	1 0.1%
Scotland	0 0.0%	0 0.0%	0 0.0%	1 0.6%	0 0.0%	1 1.0%	0 0.0%	1 4.8%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 0.3%	1 0.6%	1 0.2%	3 0.3%
South East	9 18.4%	3 6.8%	16 20.0%	33 21.0%	9 25.0%	22 22.9%	14 16.5%	3 14.3%	41 25.0%	5 8.3%	5 13.5%	2 9.5%	2 15.4%	46 22.2%	63 16.9%	22 13.8%	125 22.9%	210 19.5%
South West	8 16.3%	3 6.8%	8 10.0%	17 10.8%	4 11.1%	13 13.5%	16 18.8%	2 9.5%	19 11.6%	7 11.7%	7 18.9%	2 9.5%	0 0.0%	20 9.7%	50 13.4%	16 10.0%	60 11.0%	126 11.7%
Wales	1 2.0%	1 2.3%	1 1.2%	1 0.6%	0 0.0%	0 0.0%	1 1.2%	0 0.0%	1 0.6%	0 0.0%	1 2.7%	0 0.0%	0 0.0%	4 1.9%	3 0.8%	2 1.3%	6 1.1%	11 1.0%
West Midlands	1 2.0%	3 6.8%	9 11.2%	9 5.7%	1 2.8%	7 7.3%	6 7.1%	1 4.8%	10 6.1%	6 10.0%	9 24.3%	4 19.0%	1 4.8%	29 14.0%	26 7.0%	15 9.4%	55 10.1%	96 8.9%
Yorkshire & the Humber	7 14.3%	8 18.2%	4 5.0%	11 7.0%	4 11.1%	6 6.2%	10 11.8%	2 9.5%	10 6.1%	8 13.3%	1 2.7%	2 9.5%	2 15.4%	19 9.2%	38 10.2%	17 10.6%	39 7.1%	94 8.7%
Overseas	0 0.0%	0 0.0%	3 3.8%	2 1.3%	0 0.0%	0 0.0%	0 0.0%	1 11.1%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	3 1.4%	2 0.5%	1 0.6%	6 1.1%	9 0.8%
Total	49	44	80	157	36	96	85	30	163	60	37	21	13	207	372	160	547	1079

Appendix 5

GCSE awarding body used by participants: frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci		ICT		CS/ICT	Total
	ST	NST	HOD	ST	NST	HOD	ST	NST	HOD	ST	NST	ST	NST	HOD	
AQA	27 56.3%	33 70.2%	35 43.8%	31 19.3%	8 22.2%	16 16.8%	20 23.5%	4 22.2%	49 29.9%	17 30.4%	4 11.1%	3 15.0%	2 18.2%	27 13.3%	276 26.0%
CIE	2 4.2%	1 2.1%	4 5.0%	1 0.6%	0 0.0%	0 0.0%	1 1.2%	0 0.0%	0 0.0%	1 1.8%	1 2.8%	1 5.0%	0 0.0%	9 4.4%	21 2.0%
CCEA	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 0.5%	1 0.1%
Edexcel	6 12.5%	27 57.4%	20 25.0%	87 54.0%	18 50.0%	59 62.1%	34 40.0%	2 11.1%	51 31.1%	22 39.3%	1 2.8%	5 25.0%	2 18.2%	54 26.6%	388 36.6%
OCR	13 27.1%	26 55.3%	22 27.5%	11 6.8%	5 13.9%	29 30.5%	25 29.4%	4 22.2%	52 31.7%	56 100.0%	28 77.8%	15 75.0%	2 18.2%	161 79.3%	449 42.4%
SQA	0 0.0%	0 0.0%	0 0.0%	1 0.6%	0 0.0%	0 0.0%	0 0.0%	1 5.6%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	2 0.2%
WJEC	1 2.1%	2 4.3%	1 1.3%	1 0.6%	0 0.0%	1 1.1%	7 8.2%	1 5.6%	16 9.8%	1 1.8%	2 5.6%	1 5.0%	1 9.1%	15 7.4%	50 4.7%
Other	0 0.0%	0 0.0%	0 0.0%	2 1.2%	0 0.0%	2 2.1%	0 0.0%	2 11.1%	1 0.6%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	7 0.7%
Unsure	0 0.0%	6 12.8%	0 0.0%	1 0.6%	7 19.4%	1 1.1%	1 1.2%	2 11.1%	0 0.0%	1 1.8%	1 2.8%	1 5.0%	3 27.3%	0 0.0%	24 2.3%
Unavailable at KS4	1 2.1%	2 4.3%	0 0.0%	4 2.5%	0 0.0%	1 1.1%	1 1.2%	4 22.2%	4 2.4%	1 1.8%	1 2.8%	0 0.0%	3 27.3%	2 1.0%	24 2.3%
Other quals only	1 2.1%	1 2.1%	2 2.5%	0 0.0%	1 2.8%	0 0.0%	4 4.7%	0 0.0%	0 0.0%	2 3.6%	0 0.0%	0 0.0%	0 0.0%	3 1.5%	14 1.3%
Total no. participants	48	47	80	161	36	95	85	18	164	56	36	20	11	203	1060

Note: Numbers in the 'total' column may be higher than the sum of numbers in the column as it is possible that some schools use multiple awarding bodies.

Appendix 6
A-level awarding body used by participants: frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci		ICT		CS/ICT	Total
	ST	NST	HOD	ST	NST	HOD	ST	NST	HOD	ST	NST	ST	NST	HOD	
AQA	16 32.7%	7 15.6%	28 35.9%	25 16.4%	2 6.1%	9 10.2%	8 9.5%	4 23.5%	30 19.9%	11 19.6%	1 3.2%	1 6.7%	2 16.7%	37 20.9%	181 18.3%
CIE	0 0.0%	0 0.0%	2 2.6%	1 0.7%	0 0.0%	0 0.0%	1 1.2%	0 0.0%	0 0.0%	0 0.0%	1 3.2%	0 0.0%	0 0.0%	3 1.7%	8 0.8%
CCEA	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 0.6%	1 0.1%
Edexcel	3 6.1%	1 2.2%	3 3.8%	59 38.8%	7 21.2%	39 44.3%	32 38.1%	4 23.5%	45 29.8%	0 0.0%	1 3.2%	2 13.3%	2 16.7%	27 15.3%	225 22.8%
OCR	23 46.9%	18 40.0%	34 43.6%	36 23.7%	2 6.1%	19 21.6%	8 9.5%	2 11.8%	22 14.6%	20 35.7%	9 29.0%	8 53.3%	2 16.7%	73 41.2%	276 27.9%
SQA	0 0.0%	0 0.0%	0 0.0%	1 0.7%	0 0.0%	0 0.0%	0 0.0%	1 5.9%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	2 0.2%
WJEC	1 2.0%	1 2.2%	2 2.6%	1 0.7%	0 0.0%	1 1.1%	2 2.4%	0 0.0%	7 4.6%	1 1.8%	0 0.0%	2 13.3%	0 0.0%	10 5.6%	28 2.8%
Other	0 0.0%	1 2.2%	1 1.3%	4 2.6%	0 0.0%	2 2.3%	0 0.0%	1 5.9%	1 0.7%	1 1.8%	1 3.2%	0 0.0%	0 0.0%	1 0.6%	13 1.3%
Unsure	0 0.0%	5 11.1%	0 0.0%	2 1.3%	9 27.3%	0 0.0%	1 1.2%	3 17.6%	1 0.7%	1 1.8%	2 6.5%	1 6.7%	4 33.3%	0 0.0%	29 2.9%
Unavailable at KS5	6 12.2%	11 24.4%	9 11.5%	26 17.1%	12 36.4%	22 25.0%	30 35.7%	5 29.4%	47 31.1%	20 35.7%	15 48.4%	1 6.7%	5 41.7%	46 26.0%	255 25.8%
Other quals only	0 0.0%	1 2.2%	2 2.6%	2 1.3%	1 3.0%	2 2.3%	7 8.3%	0 0.0%	5 3.3%	2 3.6%	1 3.2%	0 0.0%	0 0.0%	4 2.3%	27 2.7%
Total	49	45	78	152	33	88	84	17	151	56	31	15	12	177	988

Appendix 7

Number of years' teaching experience (of any subject): frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**
<1 year	0 0.0%	1 2.3%	1 1.2%	5 3.1%	2 6.1%	7 3.6%	11 13.1%	3 23.%	14 14.4%	3 5.0%	0 0.0%	3 3.1%	0 0.0%	0 0.0%	0 0.0%	19 5.2%	6 4.1%	25 4.9%
1-2 years	3 6.1%	5 11.6%	8 9.8%	9 5.6%	3 9.1%	12 6.2%	11 13.1%	1 7.7%	12 12.4%	11 18.3%	2 5.6%	13 13.5%	0 0.0%	0 0.0%	0 0.0%	34 9.3%	11 7.5%	45 8.8%
3-5 years	4 28.6%	11 25.6%	15 18.3%	27 16.7%	8 24.2%	35 17.9%	22 26.2%	4 30.8%	26 26.8%	16 26.7%	9 25.0%	25 26.0%	3 14.3%	1 8.3%	4 12.1%	72 19.7%	43 29.3%	115 22.4%
6-10 years	9 18.4%	9 20.9%	18 22.0%	37 22.8%	5 15.2%	42 21.5%	15 17.9%	2 15.4%	17 17.5%	17 28.3%	6 16.7%	23 24.0%	11 52.4%	3 25.0%	14 42.4%	89 24.3%	25 17.0%	114 22.2%
11-15 years	6 12.2%	3 7.0%	9 11.0%	34 21.0%	4 12.1%	38 19.5%	14 16.7%	1 7.7%	15 15.5%	5 8.3%	8 22.2%	13 13.5%	3 14.3%	4 33.3%	7 21.2%	62 16.9%	20 13.6%	82 16.0%
16-20 years	7 14.3%	7 16.3%	14 17.1%	14 8.6%	6 18.2%	20 10.3%	7 8.3%	2 15.4%	9 9.3%	4 6.7%	5 13.9%	9 9.4%	1 4.8%	2 16.7%	3 9.1%	33 9.0%	22 15.0%	55 10.7%
21-30 years	5 10.2%	5 11.6%	10 12.2%	20 12.3%	1 3.0%	21 10.8%	2 2.4%	0 0.0%	2 2.1%	3 5.0%	6 16.7%	9 9.4%	2 9.5%	1 8.3%	3 9.1%	32 8.7%	13 8.8%	45 8.8%
31+ years	5 10.2%	2 14.7%	7 8.5%	16 9.9%	4 12.1%	20 10.3%	2 2.4%	0 0.0%	2 2.1%	1 1.7%	0 0.0%	1 1.0%	1 4.8%	1 8.3%	2 6.1%	25 6.8%	7 4.8%	32 6.2%
Total	39	43	82	162	33	195	84	13	97	60	36	96	21	12	33	366	147	513

Appendix 8
The main reason non-specialists considered themselves a non-specialist teacher: frequency of response and % within non-specialist subject taught

	Maths	CompSci	ICT	Drama	Physics	Total
My degree is in another subject	21 48.8%	15 38.5%	7 46.7%	12 54.5%	25 52.1%	80 47.9%
My teacher training (e.g. PGCE) was in another subject	5 11.6%	9 23.1%	2 13.3%	1 4.5%	4 8.3%	21 12.6%
I mostly teach another subject	7 16.3%	1 2.6%	3 20.0%	1 4.5%	4 8.3%	16 9.6%
I have little experience in teaching SUBJECT	3 7.0%	13 33.3%	2 13.3%	6 27.3%	4 8.3%	28 16.8%
Other	7 16.3%	1 2.6%	1 6.7%	2 9.1%	11 22.9%	22 13.2%
Total	43 25.7%	39 23.4%	15 9.0%	22 13.2%	48 28.7%	167 100.0%

Appendix 9a
Have heads of department had difficulty recruiting specialist teachers in the last 2 years?: Frequency of response and % within subject of concern

	Physics	Maths	Drama	Total
Yes	42 68.9%	46 76.7%	21 35.0%	261 51.3%
No	13 21.3%	7 11.7%	28 46.7%	134 26.3%
Unsure	0 0.0%	0 0.0%	2 3.3%	2 0.4%
N/A – we haven't had to recruit in the last 2 years	6 9.8%	7 11.7%	29 48.3%	112 22.0%
Total	61	60	60	509

Appendix 9b
Have heads of Computer Science/ICT departments had difficulty recruiting specialists in the last 2 years?: Frequency of response and % within subject of concern

	Frequency	%
Yes – difficulty recruiting Computer Science teachers	50	32.5
Yes – difficulty recruiting ICT teachers	8	5.2
Yes – difficulty recruiting Computer Science and ICT teachers	47	30.5
No	14	9.1
Unsure	0	0.0
N/A – we haven't had to recruit in the last 2 years	35	22.7
Total	154	100.0

Appendix 10a
Have heads of department had to use agency staff to cover vacancies in the last 2 years?: Frequency of response and % within subject of concern

	Physics	Maths	Drama	Total
Yes	21 34.4%	31 52.5%	23 32.9%	75 37.5%
No	37 60.7%	23 39.0%	40 57.1%	100 50.0%
Unsure	0 0.0%	0 0.0%	1 1.4%	1 0.5%
N/A – we haven't had to recruit in the last 2 years	3 4.9%	5 8.5%	16 22.9%	24 12.0%
Total	61	59	70	200

Appendix 10b
Have heads of Computer Science/ICT departments had to use agency staff to cover vacancies in the last 2 years?

	Frequency	%
Yes – Computer Science agency teachers	10	6.5
Yes – ICT agency teachers	21	13.6
Yes – Computer Science and ICT agency teachers	36	23.4
No	56	36.4
Unsure	4	2.6
N/A – we haven't had to recruit in the last 2 years	27	17.5
Total	154	100.0

Appendix 11
How do heads of department think the difficulty of recruiting specialist teachers is now compared to 2 years ago?: Frequency of response and % within subject of concern

	Physics	Maths	Drama	CompSci	ICT	Total
Much more difficult	15 29.4%	20 43.5%	10 22.2%	68 68.0%	30 34.1%	143 43.3%
A little more difficult	12 23.5%	12 26.1%	12 26.7%	16 16.0%	21 23.9%	73 22.1%
About the same	18 35.3%	14 30.4%	15 33.3%	9 9.0%	28 31.8%	84 25.5%
A little easier	4 7.8%	0 0.0%	3 6.7%	2 2.0%	1 1.1%	10 3.0%
Much easier	0 0.0%	0 0.0%	1 2.2%	0 0.0%	2 2.3%	3 0.9%
Unsure	2 3.9%	0 0.0%	4 8.9%	5 5.0%	6 6.8%	17 5.2%
Total	51	46	45	100	88	330

Appendix 12
Teaching qualifications held by participants: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			I(C)T			Total		
	ST	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**
X specific TQ	32 65.3%	2 4.3%	34 35.4%	139 85.8%	7 17.5%	146 72.3%	70 82.4%	0 0.0%	70 65.4%	35 58.3%	2 5.3%	37 47.4%	17 81.0%	0 0.0%	17 47.2%	293 77.7%	11 7.7%	304 58.6%
Non-subject-specific TQ	3 6.1%	7 14.9%	10 10.4%	12 7.4%	6 15.0%	18 8.9%	5 5.9%	4 18.2%	9 8.4%	6 10.0%	2 5.3%	8 10.3%	3 14.3%	3 20.0%	6 16.7%	29 7.7%	22 15.5%	51 9.8%
No formal TQ	0 0.0%	0 0.0%	0 0.0%	2 1.2%	4 10.0%	6 3.0%	4 4.7%	2 9.1%	6 5.6%	1 1.7%	2 5.3%	3 3.8%	1 4.8%	1 6.7%	2 5.6%	8 2.1%	9 6.3%	17 3.3%
TQ in another subject	14 28.6%	38 80.9%	52 51.2%	9 5.6%	23 57.5%	32 15.8%	6 7.1%	16 72.7%	22 20.6%	18 30.0%	12 31.6%	30 38.5%	0 0.0%	11 73.3%	11 30.6%	47 12.5%	100 70.4%	147 28.3%
Total	49	47	96	162	40	202	85	22	107	60	18	78	21	15	36	377	142	519

Note: X-specific TQ refers to the teacher having a TQ in the subject to which their questionnaire related. For instance, the 34 Physics participants who said that they had such a qualification had a Physics-specific TQ.

Appendix 13

Qualifications/levels of education taught by participants: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
KS3	44 89.9%	39 92.9%	83 91.2%	144 89.4%	25 83.3%	169 88.5%	78 94.0%	12 100.0%	90 94.7%	54 90.0%	31 86.1%	85 88.5%	17 81.0%	6 54.5%	23 71.9%	337 90.1%	113 86.3%	450 89.1%
GCSE (/KS4)	45 91.8%	35 83.3%	80 87.9%	152 94.4%	18 60.0%	170 89.0%	76 91.6%	6 50.0%	82 86.3%	58 96.7%	28 77.8%	86 89.6%	17 81.0%	5 45.5%	22 68.8%	348 93.0%	92 70.2%	440 87.1%
A-level	38 77.6%	4 9.5%	42 46.2%	109 67.7%	4 13.3%	113 59.2%	53 63.9%	4 33.3%	57 60.0%	29 48.3%	4 11.1%	33 34.4%	10 47.6%	1 9.1%	11 34.4%	239 63.9%	17 13.0%	276 54.7%
Post-16 VQ	3 6.1%	3 7.1%	6 6.6%	11 6.8%	3 10.0%	14 7.3%	19 22.9%	2 16.7%	21 22.1%	6 10.0%	0 0.0%	6 6.3%	7 33.3%	4 36.4%	11 34.4%	46 12.3%	12 9.2%	58 11.5%
IB	0 0.0%	1 2.4%	1 1.1%	6 3.7%	0 0.0%	6 3.1%	1 1.2%	0 0.0%	1 1.1%	0 0.0%	2 5.6%	2 2.1%	0 0.0%	0 0.0%	0 0.0%	7 1.9%	3 2.3%	10 2.0%
Diploma	0 0.0%	1 2.4%	1 1.1%	0 0.0%	0 0.0%	0 0.0%	6 7.2%	0 0.0%	6 6.3%	0 0.0%	0 0.0%	0 0.0%	1 4.8%	1 9.1%	2 6.3%	7 1.9%	2 1.5%	9 1.8%
IGCSE	13 26.5%	1 2.4%	14 15.4%	15 9.3%	1 3.3%	16 8.4%	1 1.2%	0 0.0%	1 1.1%	0 0.0%	1 2.8%	1 1.0%	1 4.8%	0 0.0%	1 3.1%	30 8.0%	3 2.3%	33 6.5%
I A-level	0 0.0%	0 0.0%	0 0.0%	3 1.9%	0 0.0%	3 1.6%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 2.8%	1 1.0%	0 0.0%	0 0.0%	0 0.0%	3 0.8%	1 0.8%	4 0.8%
Total	49	42	91	161	30	191	83	12	95	60	36	96	21	11	32	374	131	505

Note: Totals are higher than the sums in their columns as participants generally taught students at multiple levels.

Appendix 14

How often do participants teach the subject?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Never	1 2.0%	2 4.7%	3 3.3%	0 0.0%	3 10.3%	3 1.6%	1 1.2%	2 16.7%	3 3.1%	0 0.0%	1 2.8%	1 1.1%	1 4.8%	3 30.0%	4 12.9%	3 0.8%	11 8.5%	14 2.8%
Occasional substitution	0 0.0%	2 4.7%	2 2.2%	1 0.6%	3 10.3%	4 2.1%	0 0.0%	0 0.0%	0 0.0%	1 1.7%	1 2.8%	2 2.1%	0 0.0%	1 10.0%	1 3.2%	2 0.5%	7 5.4%	9 1.8%
Some of the time	6 12.2%	20 46.5%	26 28.3%	5 3.1%	4 13.8%	9 4.8%	4 4.8%	5 41.7%	9 9.4%	0 0.0%	8 22.2%	8 8.4%	4 19.0%	2 20.0%	6 19.4%	19 5.1%	39 30.0%	58 11.5%
Most of the time	19 38.8%	11 25.6%	30 32.6%	18 11.2%	6 20.7%	24 12.7%	24 28.6%	3 25.0%	27 28.1%	27 45.8%	12 33.3%	39 41.1%	2 9.5%	1 10.0%	3 9.7%	90 24.1%	33 25.4%	123 24.5%
All of the time	23 46.9%	8 18.6%	31 33.7%	136 85.0%	13 44.8%	149 78.8%	55 65.5%	2 16.7%	57 59.4%	31 52.5%	14 38.9%	45 47.4%	14 66.7%	3 30.0%	17 54.8%	259 69.4%	40 30.8%	299 59.4%
Total	49	43	92	160	29	189	84	12	96	59	36	95	21	10	31	373	130	503

Appendix 15

The number of other subjects taught by participants: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
0	0 0.0%	4 9.5%	4 5.1%	4 25.0%	11 37.9%	15 33.3%	5 8.9%	5 41.7%	10 14.7%	0 0.0%	12 35.3%	12 16.0%	2 20.0%	3 33.3%	5 26.3%	11 6.9%	35 27.8%	46 16.1%
1	13 36.1%	20 47.6%	33 42.3%	9 56.2%	9 31.0%	18 40.0%	38 67.9%	6 50.0%	44 64.7%	30 73.2%	18 52.9%	48 64.0%	6 60.0%	1 11.1%	7 36.8%	90 60.4%	54 42.9%	150 52.6%
2	20 55.6%	14 33.3%	34 43.6%	3 18.8%	5 17.2%	8 17.8%	11 19.6%	0 0.0%	11 16.2%	8 19.5%	3 8.8%	11 14.7%	2 20.0%	4 44.4%	6 31.6%	44 27.7%	26 20.6%	70 24.6%
3	3 8.3%	3 7.1%	6 7.7%	0 0.0%	3 10.3%	3 6.7%	2 3.6%	1 8.3%	3 4.4%	1 2.4%	1 2.9%	2 2.7%	0 0.0%	1 11.1%	1 5.3%	6 3.8%	9 7.1%	15 5.3%
4	0 0.0%	1 2.4%	1 1.3%	0 0.0%	1 3.4%	1 2.2%	0 0.0%	0 0.0%	0 0.0%	1 2.4%	0 0.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	1 0.6%	2 1.6%	3 1.1%
5	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 2.4%	0 0.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	1 0.6%	0 0.0%	1 0.4%
Total	36	42	78	16	29	45	56	12	68	41	34	75	10	9	19	159	126	285

Note: This number excludes PSHE and its variants, Citizenship, Careers and its variants

Appendix 16

How difficult do you find teaching subject-specific skills?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Very easy	16 42.1%	1 3.6%	17 25.8%	73 53.7%	4 25.0%	77 50.7%	29 43.3%	0 0.0%	29 42.0%	8 15.4%	0 0.0%	8 10.4%	8 53.3%	0 0.0%	8 44.4%	134 43.5%	5 6.8%	139 36.4%
Quite easy	11 28.9%	7 25.0%	18 27.3%	41 30.1%	5 31.2%	46 30.3%	26 38.8%	0 0.0%	26 37.7%	23 44.2%	3 12.0%	26 33.8%	3 20.0%	2 66.7%	5 27.8%	104 33.8%	17 23.0%	121 31.7%
Manageable	10 26.3%	16 57.1%	26 39.4%	20 14.7%	5 31.2%	25 16.4%	11 16.4%	2 100.0%	13 18.8%	15 28.8%	10 40.0%	25 32.5%	3 20.0%	1 33.3%	4 22.2%	59 19.2%	34 45.9%	93 24.3%
Quite difficult	1 2.6%	4 14.3%	5 7.6%	2 1.5%	1 6.2%	3 2.0%	1 1.5%	0 0.0%	1 1.4%	5 9.6%	8 32.0%	13 16.9%	1 6.7%	0 0.0%	1 5.6%	10 3.2%	13 17.6%	23 6.0%
Very difficult	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 6.2%	1 0.7%	0 0.0%	0 0.0%	0 0.0%	1 1.9%	3 12.0%	4 5.2%	0 0.0%	0 0.0%	0 0.0%	1 0.3%	4 5.4%	5 1.3%
N/A	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 4.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 1.4%	1 0.3%
Total	38	28	66	136	16	152	67	2	69	52	25	77	15	3	18	308	74	382

Appendix 17

How difficult do you find teaching subject-specific content?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Very easy	20 52.6%	1 3.7%	21 32.3%	80 59.3%	4 25.0%	84 55.6%	21 31.3%	0 0.0%	21 30.4%	9 17.3%	0 0.0%	9 11.7%	4 26.7%	1 33.3%	5 27.8%	134 46.3%	6 8.2%	140 36.8%
Quite easy	15 39.5%	8 29.6%	23 35.4%	40 29.6%	4 25.0%	44 29.1%	32 47.8%	0 0.0%	32 46.4%	26 50.0%	6 24.0%	32 41.6%	8 53.3%	0 0.0%	8 44.4%	121 39.4%	18 24.7%	139 36.6%
Manageable	3 7.9%	8 29.6%	11 16.9%	14 10.4%	7 43.8%	21 13.9%	14 20.9%	1 50.0%	15 21.7%	13 25.0%	13 52.0%	26 33.8%	2 13.3%	2 66.7%	4 22.2%	46 15.0%	31 40.8%	77 20.3%
Quite difficult	0 0.0%	10 37.0%	10 15.4%	1 0.7%	0 0.0%	1 0.7%	0 0.0%	1 50.0%	1 1.4%	3 5.8%	3 12.0%	6 7.8%	1 6.7%	0 0.0%	1 5.6%	5 1.6%	14 19.2%	19 5.0%
Very difficult	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 6.2%	1 0.7%	0 0.0%	0 0.0%	0 0.0%	1 1.9%	2 8.0%	3 3.9%	0 0.0%	0 0.0%	0 0.0%	1 0.3%	3 4.1%	4 1.1%
N/A	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 4.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 1.4%	1 0.3%
Total	38	27	65	135	16	151	67	2	69	52	25	77	15	3	18	307	73	380

Appendix 18
How difficult do you find behaviour management?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Very easy	7 18.4%	7 25.0%	14 21.2%	27 19.9%	2 13.3%	29 19.2%	19 28.4%	0 0.0%	19 27.5%	8 15.4%	6 24.0%	14 18.2%	1 6.7%	2 66.7%	3 16.7%	62 20.1%	17 23.3%	79 20.7%
Quite easy	14 36.8%	12 42.9%	26 39.4%	45 33.1%	6 40.0%	51 33.8%	27 40.3%	2 100.0%	29 42.0%	23 44.2%	9 36.0%	32 41.6%	4 26.7%	0 0.0%	4 22.2%	113 36.7%	29 39.7%	142 37.3%
Manageable	13 34.2%	7 25.0%	20 30.3%	47 34.6%	4 26.7%	51 33.8%	14 20.9%	0 0.0%	14 20.3%	17 32.7%	4 16.0%	21 27.3%	9 60.0%	0 0.0%	9 50.0%	100 32.5%	15 20.5%	115 30.2%
Quite difficult	4 10.5%	2 7.1%	6 9.1%	14 10.3%	2 13.3%	16 10.6%	6 9.0%	0 0.0%	6 8.7%	2 3.8%	3 12.0%	5 6.5%	1 6.7%	0 0.0%	1 5.6%	27 8.8%	7 9.6%	34 8.9%
Very difficult	0 0.0%	0 0.0%	0 0.0%	2 1.5%	1 6.7%	3 2.0%	1 1.5%	0 0.0%	1 1.4%	2 3.8%	2 8.0%	4 5.2%	0 0.0%	1 33.3%	1 5.6%	5 1.6%	4 5.5%	9 2.4%
N/A	0 0.0%	0 0.0%	0 0.0%	1 0.7%	0 0.0%	1 0.7%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 4.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	1 0.3%	1 1.4%	2 0.5%
Total	38	28	66	136	15	151	67	2	69	52	25	77	15	3	18	308	73	381

Appendix 19

How difficult do you find setting practical work?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Very easy	10 26.3%	4 14.3%	14 21.2%	8 5.9%	2 12.5%	10 6.6%	38 56.7%	0 0.0%	38 55.1%	6 11.5%	2 8.0%	8 10.4%	2 13.3%	1 33.3%	3 161.7%	64 20.8%	9 12.2%	73 19.2%
Quite easy	14 36.8%	5 17.9%	19 28.8%	22 16.3%	6 37.5%	28 18.5%	23 34.3%	1 50.0%	24 34.8%	24 46.2%	7 28.0%	31 40.3%	6 40.0%	1 33.3%	7 38.9%	89 29.0%	20 27.0%	109 28.6%
Manageable	8 21.1%	13 46.4%	21 31.8%	41 30.4%	3 18.8%	44 29.1%	5 7.5%	0 0.0%	5 7.2%	16 30.8%	10 40.0%	26 33.8%	7 46.7%	1 33.3%	8 44.4%	77 25.1%	27 36.5%	104 27.3%
Quite difficult	5 13.2%	3 10.7%	8 12.1%	19 14.1%	2 12.5%	21 13.9%	1 1.5%	1 50.0%	2 2.9%	6 11.5%	3 12.0%	9 11.7%	0 0.0%	0 0.0%	0 0.0%	31 10.1%	9 12.2%	40 10.5%
Very difficult	1 2.6%	3 10.7%	4 6.1%	4 3.0%	1 6.2%	5 3.3%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	2 8.0%	2 2.6%	0 0.0%	0 0.0%	0 0.0%	5 1.6%	6 8.1%	11 2.9%
Unsure	0 0.0%	0 0.0%	0 0.0%	1 0.7%	0 0.0%	1 0.7%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 0.3%	0 0.0%	1 0.3%
N/A	0 0.0%	0 0.0%	0 0.0%	40 29.6%	2 12.5%	42 27.8%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 4.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	40 13.0%	3 4.1%	43 11.3%
Total	38	28	66	135	16	151	67	2	69	52	25	77	15	3	18	307	74	381

Appendix 20

How difficult do you find marking practical work?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Very easy	3 7.9%	4 14.3%	7 10.6%	7 5.2%	3 18.8%	10 6.6%	12 17.9%	0 0.0%	12 17.4%	4 7.7%	0 0.0%	4 5.2%	1 6.7%	0 0.0%	1 5.6%	27 8.8%	7 9.5%	34 8.9%
Quite easy	12 31.6%	6 21.4%	18 27.3%	16 11.9%	4 25.0%	20 13.2%	24 35.8%	0 0.0%	24 34.8%	14 26.9%	7 28.0%	21 27.3%	5 33.3%	2 66.7%	7 38.9%	71 23.1%	19 25.7%	90 23.6%
Manageable	10 26.3%	12 42.9%	22 33.3%	35 25.9%	4 25.0%	39 25.8%	23 34.3%	1 50.0%	24 34.8%	19 36.5%	8 32.0%	27 35.1%	6 40.0%	1 33.3%	7 38.9%	93 30.3%	26 35.1%	119 31.2%
Quite difficult	10 26.3%	4 14.3%	14 21.2%	22 16.3%	4 25.0%	26 17.2%	8 11.9%	1 50.0%	9 13.0%	14 26.9%	8 32.0%	22 28.6%	2 13.3%	0 0.0%	2 11.1%	56 18.2%	17 23.0%	73 19.2%
Very difficult	1 2.6%	0 0.0%	1 1.5%	11 8.1%	0 0.0%	11 7.3%	0 0.0%	0 0.0%	0 0.0%	1 1.9%	1 4.0%	2 2.6%	1 6.7%	0 0.0%	1 5.6%	14 4.6%	1 1.4%	15 3.9%
Unsure	0 0.0%	0 0.0%	0 0.0%	4 3.0%	0 0.0%	4 2.6%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	4 1.3%	0 0.0%	4 1.0%
N/A	2 5.3%	2 7.1%	4 6.1%	40 29.6%	1 6.2%	41 27.2%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 4.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	42 13.7%	4 5.4%	46 12.1%
Total	38	28	66	135	16	151	67	2	69	52	25	77	15	3	18	307	74	381

Appendix 21

How difficult do you find setting classwork/homework?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Very easy	8 21.1%	2 7.1%	10 15.2%	42 30.9%	2 12.5%	44 28.9%	9 13.6%	0 0.0%	9 13.2%	7 13.5%	2 8.0%	9 11.7%	2 13.3%	2 66.7%	4 22.2%	68 22.1%	8 10.8%	76 19.9%
Quite easy	16 42.1%	13 46.4%	29 43.9%	59 43.4%	3 18.8%	62 40.8%	25 37.9%	1 50.0%	26 38.2%	30 57.7%	8 32.0%	38 49.4%	4 26.7%	0 0.0%	4 22.2%	134 43.6%	25 33.8%	159 41.7%
Manageable	13 34.2%	11 39.3%	24 36.4%	32 23.5%	9 56.2%	41 27.0%	19 28.8%	1 50.0%	20 29.4%	11 21.2%	13 52.0%	24 31.2%	8 53.3%	1 33.3%	9 50.0%	83 27.0%	35 47.3%	118 31.0%
Quite difficult	1 2.6%	2 7.1%	3 4.5%	3 2.2%	0 0.0%	3 2.0%	13 19.7%	0 0.0%	13 19.1%	4 7.7%	1 4.0%	5 6.5%	1 6.7%	0 0.0%	1 5.6%	22 7.2%	3 4.1%	25 6.6%
Very difficult	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
N/A	0 0.0%	0 0.0%	0 0.0%	0 0.0%	2 12.5%	2 1.3%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 4.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	3 4.1%	3 0.8%
Total	38	28	66	136	16	152	66	2	68	52	25	77	15	3	18	307	74	381

Appendix 22

How difficult do you find marking classwork/homework?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Very easy	4 10.5%	4 14.3%	8 12.1%	26 19.3%	4 25.0%	30 19.9%	5 7.5%	0 0.0%	5 7.2%	5 9.6%	0 0.0%	5 6.5%	2 13.3%	2 66.7%	4 22.2%	42 13.7%	10 13.5%	52 13.6%
Quite easy	13 34.2%	9 32.1%	22 33.3%	30 22.2%	4 25.0%	34 22.5%	17 25.4%	2 100.0%	19 27.5%	16 30.8%	7 28.0%	23 29.9%	2 13.3%	0 0.0%	2 11.1%	78 25.4%	22 29.7%	100 26.2%
Manageable	14 36.8%	13 46.4%	27 40.9%	52 38.5%	6 37.5%	58 38.4%	30 44.8%	0 0.0%	30 43.5%	23 44.2%	14 56.0%	37 48.1%	4 26.7%	1 33.3%	6 33.3%	123 40.1%	34 45.9%	157 41.2%
Quite difficult	6 15.8%	2 7.1%	8 12.1%	18 13.3%	0 0.0%	18 11.9%	10 14.9%	0 0.0%	10 14.5%	5 9.6%	3 12.0%	8 10.4%	6 40.0%	0 0.0%	6 33.3%	45 14.7%	5 6.8%	50 13.1%
Very difficult	1 2.6%	0 0.0%	1 1.5%	9 6.7%	1 6.2%	10 6.6%	5 7.5%	0 0.0%	5 7.2%	3 5.8%	0 0.0%	3 3.9%	1 6.7%	0 0.0%	1 5.6%	19 6.2%	1 1.4%	20 5.2%
N/A	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 6.2%	1 0.7%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 4.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	2 2.7%	2 0.5%
Total	38	28	66	135	16	151	67	2	69	52	25	77	15	3	18	307	74	381

Appendix 23

How difficult do you find setting controlled assessment tasks?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Very easy	3 7.9%	2 7.1%	5 7.6%	14 10.4%	1 6.2%	15 9.9%	11 16.4%	0 0.0%	11 15.9%	4 7.7%	0 0.0%	4 5.2%	3 20.0%	0 0.0%	3 16.7%	35 11.4%	3 4.1%	38 10.0%
Quite easy	17 44.7%	6 21.4%	23 34.8%	16 11.9%	1 6.2%	17 11.3%	26 38.8%	1 50.0%	27 39.1%	15 28.8%	5 20.0%	20 26.0%	3 20.0%	2 66.7%	5 27.8%	77 25.1%	15 20.3%	92 24.1%
Manageable	14 36.8%	8 28.6%	22 33.3%	14 10.4%	6 37.5%	20 13.2%	18 26.9%	0 0.0%	18 26.1%	23 44.2%	5 20.0%	28 36.4%	7 46.7%	0 0.0%	7 38.9%	76 24.8%	19 25.7%	95 24.9%
Quite difficult	3 7.9%	8 28.6%	11 16.7%	5 3.7%	3 18.8%	8 5.3%	10 14.9%	0 0.0%	10 14.5%	7 13.5%	9 36.0%	16 20.8%	1 6.7%	1 33.3%	2 11.1%	26 8.5%	21 28.4%	47 12.3%
Very difficult	0 0.0%	0 0.0%	0 0.0%	1 0.7%	1 6.2%	2 1.3%	1 1.5%	0 0.0%	1 1.4%	2 3.8%	5 20.0%	7 9.1%	0 0.0%	0 0.0%	0 0.0%	4 1.3%	6 8.1%	10 2.6%
Unsure	0 0.0%	1 3.6%	1 1.5%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 1.4%	1 0.3%
N/A	1 2.6%	3 10.7%	4 6.1%	85 63.0%	4 25.0%	89 58.9%	1 1.5%	1 50.0%	2 2.9%	1 1.9%	1 4.0%	2 2.6%	1 6.7%	0 0.0%	1 5.6%	89 29.0%	9 12.2%	98 25.7%
Total	38	28	66	135	16	151	67	2	69	52	25	77	15	3	18	307	74	381

Appendix 24

How difficult do you find marking controlled assessment?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Very easy	1 2.6%	2 7.1%	3 4.5%	14 10.4%	2 12.5%	16 10.6%	5 7.5%	0 0.0%	5 7.2%	5 9.6%	0 0.0%	5 6.5%	2 13.3%	1 33.3%	3 16.7%	27 8.8%	5 6.8%	32 8.4%
Quite easy	13 34.2%	6 21.4%	19 28.8%	16 11.9%	3 18.8%	19 12.6%	21 31.3%	1 50.0%	22 31.9%	8 15.4%	4 16.0%	12 15.6%	2 13.3%	1 33.3%	3 16.7%	60 19.5%	15 20.3%	75 19.7%
Manageable	14 36.8%	4 14.3%	18 27.3%	11 8.1%	3 18.8%	14 9.3%	20 29.9%	0 0.0%	20 29.0%	17 32.7%	10 40.0%	27 35.1%	5 33.3%	1 33.3%	6 33.3%	67 21.8%	18 24.3%	85 22.3%
Quite difficult	9 23.7%	12 42.9%	21 31.8%	8 5.9%	2 12.5%	10 6.6%	19 28.4%	0 0.0%	19 27.5%	14 26.9%	5 20.0%	19 24.7%	3 20.0%	0 0.0%	3 16.7%	53 17.3%	19 25.7%	72 18.9%
Very difficult	0 0.0%	1 3.6%	1 1.5%	4 3.0%	2 12.5%	6 4.0%	1 1.5%	0 0.0%	1 1.4%	5 9.6%	4 16.0%	9 11.7%	2 13.3%	0 0.0%	2 11.1%	12 3.9%	7 9.5%	19 5.0%
Unsure	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	3 5.8%	1 4.0%	4 5.2%	0 0.0%	0 0.0%	0 0.0%	3 1.0%	1 1.4%	4 1.0%
N/A	1 2.6%	3 10.7%	4 6.1%	82 60.7%	4 25.0%	86 57.0%	1 1.5%	1 50.0%	2 2.9%	0 0.0%	1 4.0%	1 1.3%	1 6.7%	0 0.0%	1 5.6%	85 27.7%	9 12.2%	94 24.7%
Total	38	28	66	135	16	151	67	2	69	52	25	77	15	3	18	307	74	381

Appendix 25

How difficult do you find moderating assessment?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**	**ST**	**NST**	**All**
Very easy	3 7.9%	3 10.7%	6 9.1%	10 7.4%	2 12.5%	12 7.9%	3 4.5%	0 0.0%	3 4.3%	2 3.8%	0 0.0%	3 3.9%	2 13.3%	1 33.3%	3 16.7%	20 6.5%	6 8.1%	26 6.8%
Quite easy	11 28.9%	5 17.9%	16 24.2%	25 18.5%	3 18.8%	28 18.5%	18 26.9%	0 0.0%	18 26.1%	15 28.8%	3 12.0%	18 23.4%	2 13.3%	2 66.7%	4 22.2%	71 23.1%	13 17.6%	84 22.0%
Manageable	14 36.8%	5 17.9%	19 28.8%	23 17.0%	6 37.5%	29 19.2%	28 41.8%	1 50.0%	29 42.0%	14 26.9%	10 40.0%	24 31.2%	8 53.3%	0 0.0%	8 44.4%	87 28.3%	22 29.7%	109 28.6%
Quite difficult	5 13.2%	11 39.3%	16 24.2%	11 8.1%	2 12.5%	13 8.6%	12 17.9%	1 50.0%	13 18.8%	14 26.9%	6 24.0%	20 26.0%	1 6.7%	0 0.0%	1 5.6%	43 14.0%	20 27.0%	63 16.5%
Very difficult	2 5.3%	1 3.6%	3 4.5%	5 3.7%	1 6.2%	6 4.0%	3 4.5%	0 0.0%	3 4.3%	5 9.6%	4 16.0%	9 11.7%	1 6.7%	0 0.0%	1 5.6%	16 5.2%	6 8.1%	22 5.8%
Unsure	1 2.6%	0 0.0%	1 1.5%	2 1.5%	0 0.0%	2 1.3%	1 1.5%	0 0.0%	1 1.4%	2 3.8%	1 4.0%	3 3.9%	0 0.0%	0 0.0%	0 0.0%	6 2.0%	1 1.4%	7 1.8%
N/A	2 5.3%	3 10.7%	5 7.6%	59 43.7%	2 12.5%	61 40.4%	2 3.0%	0 0.0%	2 2.9%	0 0.0%	1 4.0%	1 1.3%	1 6.7%	0 0.0%	1 5.6%	64 20.8%	6 8.1%	70 18.4%
Total	38	28	66	135	16	151	67	2	69	52	25	77	15	3	18	307	74	381

Appendix 26
How difficult do you find setting mock assessments?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Very easy	11 28.9%	4 14.3%	15 22.7%	26 19.3%	2 12.5%	28 18.5%	8 11.9%	0 0.0%	8 11.6%	6 11.5%	2 8.0%	8 10.4%	1 6.7%	1 33.3%	2 11.1%	52 16.9%	9 12.2%	61 16.0%
Quite easy	15 39.5%	6 21.4%	21 31.8%	46 34.1%	1 6.2%	47 31.1%	27 40.3%	1 50.0%	28 40.6%	23 44.2%	3 12.0%	26 33.8%	6 40.0%	1 33.3%	7 38.9%	117 38.1%	12 16.2%	129 33.9%
Manageable	10 26.3%	11 39.3%	21 31.8%	33 24.4%	10 62.5%	43 28.5%	18 26.9%	1 50.0%	19 27.5%	17 32.7%	9 36.0%	26 33.8%	6 40.0%	1 33.3%	7 38.9%	84 27.4%	32 43.2%	116 30.4%
Quite difficult	0 0.0%	6 21.4%	6 9.1%	12 8.9%	1 6.2%	13 8.6%	11 16.4%	0 0.0%	11 15.9%	5 9.6%	6 24.0%	11 14.3%	2 13.3%	0 0.0%	2 11.1%	30 9.8%	13 17.6%	43 11.3%
Very difficult	0 0.0%	0 0.0%	0 0.0%	3 2.2%	0 0.0%	3 2.0%	2 3.0%	0 0.0%	2 2.9%	0 0.0%	4 16.0%	4 5.2%	0 0.0%	0 0.0%	0 0.0%	5 1.6%	4 5.4%	9 2.4%
Unsure	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 1.9%	0 0.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	1 0.3%	0 0.0%	1 0.3%
N/A	2 5.3%	1 3.6%	3 4.5%	15 11.1%	2 12.5%	17 11.3%	1 1.5%	0 0.0%	1 1.4%	0 0.0%	1 4.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	18 5.9%	4 5.4%	22 5.8%
Total	38	28	66	135	16	151	67	2	69	52	25	77	15	3	18	307	74	381

Appendix 27

How difficult do you find marking past papers?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Very easy	16 42.1%	4 14.3%	20 30.3%	54 40.0%	6 37.5%	60 39.7%	4 6.0%	0 0.0%	4 5.8%	11 21.2%	4 16.0%	15 19.5%	2 13.3%	2 66.7%	4 22.2%	87 28.3%	16 21.6%	103 27.0%
Quite easy	17 44.7%	9 32.1%	26 39.4%	45 33.3%	3 18.8%	48 31.8%	11 16.4%	1 50.0%	12 17.4%	28 53.8%	11 44.0%	39 50.6%	4 26.7%	1 33.3%	5 27.8%	105 34.2%	25 33.8%	130 34.1%
Manageable	4 10.5%	13 46.4%	17 25.8%	22 16.3%	7 43.8%	29 19.2%	28 41.8%	0 0.0%	28 40.6%	12 23.1%	7 28.0%	19 24.7%	5 33.3%	0 0.0%	5 27.8%	71 23.1%	27 36.5%	98 25.7%
Quite difficult	0 0.0%	2 7.1%	2 3.0%	9 6.7%	0 0.0%	9 6.0%	9 13.4%	1 50.0%	10 14.5%	0 0.0%	2 8.0%	2 2.6%	3 20.0%	0 0.0%	3 16.7%	21 6.8%	5 6.8%	26.6.8%
Very difficult	1 2.6%	0 0.0%	1 1.5%	3 2.2%	0 0.0%	3 2.0%	2 3.0%	0 0.0%	2 2.9%	0 0.0%	0 0.0%	0 0.0%	1 6.7%	0 0.0%	1 5.6%	7 2.3%	0 0.0%	7 1.8%
Unsure	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 1.5%	0 0.0%	1 1.4%	1 1.9%	0 0.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	2 0.7%	0 0.0%	2 0.5%
N/A	0 0.0%	0 0.0%	0 0.0%	2 1.5%	0 0.0%	2 1.3%	12 17.9%	0 0.0%	12 17.4%	0 0.0%	1 4.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	14 4.6%	1 1.4%	15 3.9%
Total	38	28	66	135	16	151	67	2	69	52	25	77	15	3	18	307	74	381

Appendix 28
How difficult do you find answering students' questions?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Very easy	19 50.0%	2 6.9%	21 31.8%	68 50.4%	1 6.2%	69 45.7%	21 31.3%	0 0.0%	21 30.4%	9 17.3%	0 0.0%	9 11.7%	4 26.7%	1 33.3%	5 27.8%	121 39.5%	4 5.3%	125 32.8%
Quite easy	17 44.7%	5 17.2%	22 33.3%	60 44.4%	9 56.2%	69 45.7%	37 55.2%	0 0.0%	37 53.6%	27 51.9%	5 20.0%	32 41.6%	6 40.0%	2 66.7%	8 44.4%	147 48.0%	21 28.0%	168 44.1%
Manageable	1 2.6%	13 44.8%	14 21.2%	7 5.2%	5 31.2%	12 7.9%	9 13.4%	2 100.0%	11 15.9%	15 28.8%	11 44.0%	26 33.8%	5 33.3%	0 0.0%	5 27.8%	37 12.1%	31 41.3%	68 17.8%
Quite difficult	0 0.0%	9 31.0%	9 13.6%	0 0.0%	1 6.2%	1 0.7%	0 0.0%	0 0.0%	0 0.0%	1 1.9%	5 20.0%	6 7.8%	0 0.0%	0 0.0%	0 0.0%	1 0.3%	15 20.0%	16 4.2%
Very difficult	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	3 12.0%	3 3.9%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	3 4.0%	3 0.8%
Unsure	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
N/A	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 4.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 1.3%	1 0.3%
Total	38	29	66	135	16	151	67	2	69	52	25	77	15	3	18	306	75	381

Appendix 29
How difficult do you find predicting performance?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Very easy	3 7.9%	1 3.6%	4 6.1%	11 8.1%	0 0.0%	11 7.3%	4 6.0%	0 0.0%	4 5.8%	2 3.8%	1 4.0%	3 3.9%	1 6.7%	0 0.0%	1 5.6%	21 6.8%	2 2.7%	23 6.0%
Quite easy	14 36.8%	5 17.9%	19 28.8%	59 43.7%	5 31.2$	64 42.4%	22 32.8%	0 0.0%	22 31.9%	14 26.9%	2 8.0%	16 20.8%	6 40.0%	2 66.7%	8 44.4%	115 37.5%	14 18.9%	129 33.9%
Manageable	16 42.1%	11 39.3%	27 40.9%	41 30.4%	4 25.0%	45 29.8%	20 29.9%	1 50.0%	21 30.4%	20 38.5%	6 24.0%	26 33.8%	5 33.3%	1 33.3%	6 33.3%	102 33.2%	23 31.1%	125 32.8%
Quite difficult	5 13.2%	9 32.1%	14 21.2%	17 12.6%	6 37.5%	23 15.2%	17 25.4%	1 50.0%	18 26.1%	13 25.0%	13 52.0%	26 33.8%	3 20.0%	0 0.0%	3 16.7%	55 17.9%	29 39.2%	84 22.0%
Very difficult	0 0.0%	2 7.1%	2 3.0%	7 5.2%	1 6.2$	8 5.3%	3 4.5%	0 0.0%	3 4.3%	3 5.8%	2 8.0%	5 6.5%	0 0.0%	0 0.0%	0 0.0%	13 4.2%	5 6.8%	18 4.7%
Unsure	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 1.5%	0 0.0%	1 1.4%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 0.3%	0 0.0%	1 0.3%
N/A	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 4.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 1.4%	1 0.3%
Total	38	28	66	135	16	151	67	2	69	52	25	77	15	3	18	307	74	381

Appendix 30
How difficult do you find giving students and parents feedback?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
Very easy	5 13.2%	3 10.7%	8 12.1%	25 18.5%	3 18.8%	28 18.5%	14 7.7%	0 0.0%	14 20.3%	4 7.7%	2 8.0%	6 7.8%	1 6.7%	2 66.7%	3 16.7%	49 16.0%	10 13.5%	59 15.5%
Quite easy	19 50.0%	6 21.4%	25 37.9%	53 39.3%	4 25.0%	57 37.7%	34 50.7%	0 0.0%	34 49.3%	23 44.2%	3 12.8%	26 33.8%	5 33.3%	1 33.3%	6 33.3%	134 43.6%	14 18.9%	148 38.8%
Manageable	11 28.9%	13 46.4%	24 36.4%	47 34.8%	8 50.0%	55 36.4%	15 22.4%	2 100.0%	17 24.6%	19 36.5%	12 48.0%	31 40.3%	6 40.0%	0 0.0%	6 33.3%	98 31.9%	35 47.3%	133 34.9%
Quite difficult	3 7.9%	6 21.4%	9 13.6%	7 5.2%	1 6.2%	8 5.3%	4 6.0%	0 0.0%	4 5.8%	4 7.7%	7 28.0%	11 14.3%	2 13.3%	0 0.0%	2 11.1%	20 6.5%	14 18.9%	34 8.9%
Very difficult	0 0.0%	0 0.0%	0 0.0%	3 2.2%	0 0.0%	3 2.0%	0 0.0%	0 0.0%	0 0.0%	2 3.8%	0 0.0%	2 2.6%	1 6.7%	0 0.0%	1 5.6%	6 2.0%	0 0.0%	6 1.6%
Unsure	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
N/A	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 4.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 1.4%	1 0.3%
Total	38	28	66	135	16	151	67	2	69	52	25	77	15	3	18	307	74	381

Appendix 31
Has teaching your non-specialist subject had any positive impacts on your teaching of your specialist subject?: Frequency of response and % within subject of concern

	Physics	Maths	Drama	CompSci	ICT	Total
Yes	22 56.4%	10 45.5%	5 71.4%	20 60.6%	5 71.4%	62 57.4%
No	6 15.4%	6 27.3%	1 14.3%	7 21.2%	1 14.3%	21 19.4%
Unsure	11 28.2%	6 27.3%	1 14.3%	6 18.2%	1 14.3%	25 23.1%
Total	39	22	7	33	7	108

Appendix 32
Do you enjoy teaching your non-specialist subject?: Frequency of response and % within subject of concern

	Physics	Maths	Drama	CompSci	ICT	Total
Yes	19 45.2%	18 64.3%	5 45.5%	16 45.7%	5 50.0%	63 50.0%
Sometimes	20 47.6%	7 25.0%	5 45.5%	18 51.4%	4 40.0%	54 42.9%
No	23 4.8%	2 7.1%	1 9.1%	1 2.9%	1 10.0%	7 5.6%
Unsure	1 2.4%	1 3.6%	0 0.0%	0 0.0%	0 0.0%	2 1.6%
Total	42	28	11	35	10	126

Appendix 33

Do you prefer teaching your non-specialist subject to your specialist subject?: Frequency of response and % within subject of concern

	Physics	Maths	Drama	CompSci	ICT	Total
Yes	5	9	4	6	1	25
	11.9%	32.1%	36.4%	17.1%	10.0%	19.8%
Sometimes	11	6	3	15	2	37
	26.2%	21.4%	27.3%	42.9%	20.0%	29.4%
No	23	9	4	12	4	52
	54.8%	32.1%	36.4%	34.3%	40.0%	41.3%
Unsure	1	0	0	1	0	2
	2.4%	0.0%	0.0%	2.9%	0.0%	1.6%
N/A	2	4	0	1	3	10
	4.8%	14.3%	0.0%	2.9%	30.0%	7.9%
Total	42	28	11	35	10	126

Appendix 34

Do heads of department believe there are any benefits to having non-specialist teachers in their department?: Frequency of response and % within subject of concern

	Physics	Maths	Drama	CompSci/ICT	Total
Yes	27 47.4%	23 50.0%	32 45.1%	39 100.0%	121 56.8%
No	15 26.3%	15 32.6%	25 35.2%	0 0.0%	55 25.8%
Unsure	15 26.2%	8 17.4%	14 19.7%	0 0.0%	37 17.4%
Total	57	46	71	39	213

Appendix 35
Does having non-specialist teachers create additional challenges for them as heads of department?: Frequency of response and % within subject of concern

	Physics	Maths	Drama	CompSci/ICT	Total
Yes	43	31	58	116	248
	75.4%	67.4%	81.75	82.3%	78.7%
No	14	15	13	25	67
	24.6%	32.6%	18.3%	17.7%	21.3%
Total	57	46	71	141	315

Appendix 36
Which areas do teachers receive support with from their head of department or their school?: Frequency of response and % within subject of concern

	Physics			Maths			Drama			CompSci			ICT			Total		
	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All	ST	NST	All
General subject knowledge	10	22	32	46	13	59	36	5	41	8	10	18	7	5	12	107	55	162
Subject-specific CPD	15	13	28	64	9	73	33	3	36	14	13	27	6	1	7	132	39	171
Teaching skills	12	4	16	56	6	62	33	5	38	17	6	23	4	2	6	122	23	145
Lesson planning	12	13	25	34	7	41	30	6	36	8	6	14	2	5	7	86	37	123
Setting classwork/homework	6	8	14	30	8	38	19	7	26	7	5	12	2	1	3	64	29	93
Marking classwork/homework	9	6	15	42	3	45	19	5	24	6	4	10	0	2	2	76	20	96
Setting mock assessments	13	8	21	42	4	46	18	3	21	7	4	11	2	1	3	82	20	102
Marking past papers	3	8	11	25	5	30	16	3	19	3	3	6	0	0	0	47	19	66
Total	80	82	162	339	55	394	204	37	241	70	51	121	23	17	40	716	242	958